PROGRAM REPORT ACADEMIC YEAR 2007-2008

WOMEN IN SCIENCE AND ENGINEERING (WiSE) PROGRAM



THE UNIVERSITY OF SOUTHERN CALIFORNIA

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Executive Summary

The Women in Science and Engineering (WiSE) Program continues to be USC's premiere diversity initiative, serving as a model both within the University and on a national level. Most recently, the USC WiSE Program was referenced in the January 2008 *American Society of Cell Biology Newsletter* as an important effort "to understand and change institutional climates that may impede the careers of women scientists and engineers." (See: Appendix 1)

In addition to its suite of grantmaking programs designed to support women scientists and engineers at all levels from undergraduate students to senior faculty, WiSE focuses nearly half of its annual budget on support for hiring and retaining tenured and tenure-track faculty in the USC College of Letters Arts and Sciences and the USC Viterbi School of Engineering. During the 2007-08 academic year, WiSE contributions to hiring packages enabled the recruitment of 4 new WiSE faculty (3 in Viterbi and 1 in the College) and provided funds for the retention and support of research by WiSE faculty already at USC.

WiSE plays an active role in helping to increase the representation of women faculty candidates by hosting meetings with department chairs and search committees to outline strategies for broadening the scope of searches for outstanding diversity candidates. WiSE leadership also actively meets with women faculty candidates both to transmit information about the WiSE program and resources and to provide opportunities for candidates to ask questions about USC and work-family issues that they might not ordinarily feel comfortable discussing as part of their formal interview process. During the 2007-08 academic year, WiSE participated in meetings with 20 formal candidate campus visits (9 in Viterbi and 11 in the College). Several offers to WiSE faculty joining USC in 08-09 have already been successful.

WiSE serves as an advocate for women in science and engineering faculty at USC by creating awareness of faculty diversity issues, and providing professional development opportunities. In 2007-08, WiSE hosted two unique career development workshops (November 2007 and March 2008) for WiSE faculty, Ph.D. students and postdoctoral researchers designed specifically for women in science and engineering and facilitated by the COACh program (Committee on the Advancement of Women Chemists). On February 7, 2008, WiSE Distinguished Lecturer, Computer Scientist Maria Klawe, President of Harvey Mudd College, delivered an address to the USC Community to raise the visibility of issues related to women in science and engineering. Additional activities organized by the WiSE program throughout the year helped to build community and a network of support for women scientists and engineers on campus.

New WiSE programs introduced in 2006-07 to support faculty, graduate students and postdoctoral scholars balancing new parenthood with the continuation of their research programs were fully implemented in the 2007-08 academic year; 1 faculty, 2 postdoc, and 4 Ph.D. student awards were made. The successes of WiSE family-friendly policies were highlighted as part of feature profile in the 2009 Edition of the *U.S. News and World Report "America's Best Graduate Schools"* bringing additional national visibility to USC and the WiSE Program. (See: Appendix 2)



WiSE Leadership

A critical aspect of the success of WiSE is the direct involvement of men and women faculty, at all career levels and from both the USC College and the Viterbi School of Engineering, in planning, evaluating, and guiding the program's development.

With the guidance of its diverse committees, WiSE programs have grown and evolved in response to changing needs. Continued evaluation of the success and utility of programs have helped to keep them relevant and effective.

WiSE Advisory Board

The Advisory Board held four meetings in 07-08: two during the Fall semester (10/5/07) and (11/16/07) and two during the Spring semester (1/20/08) and (1/20/08).

The Board worked hard in 07-08 to move the program towards its goals. Among the Board's accomplishments is a report on Non Tenure Track (NTT) faculty advancement. The Board also submitted a report to the Provost on space allocation and preparation for new faculty and is gratified by the significant improvement in dealing with space issues at both schools.

The NTT subcommittee, chaired by Geraldine Peters, interviewed WiSE lecturers and research faculty and generated a comprehensive report. The report served as the basis for Advisory Board recommendations for WiSE NTT faculty including: raising the visibility of research faculty in their Departments and with the deans through better integration in the Departmental activities and decision-making, active career development planning, and appropriate service assignments; and allowing lecturers to apply for the WiSE "Supplemental Faculty Support Awards (\$2500). A set of general recommendations to the Provost and deans on NTT faculty that are beyond the scope of the WiSE Advisory Board Charge, were also included for the use of the NTT faculty committee and the Academic Senate.

A good deal of activity on the issue of NTT faculty took place in 07-08, particularly in the College. The College issued formal guidelines on policies for NTT faculty, which outline opportunities for greater involvement. As outlined by the College policy, faculty committees will include TT and NTT faculty and NTT faculty evaluations will broadly mirror those used for TT faculty. The WiSE Supplemental Faculty Support Award guidelines have been changed to allow lecturers to apply; the formal program description on the website has been updated to reflect the change. Regarding a recommendation that school funds be available to support NTT who are facing a break in funding, the deans will handle funding on case by case basis and will implement no broad policy on stop-gap funding. In the cases where a WiSE research faculty is considered for a TT position at USC, the WiSE program will address requests from schools for set-up funds through regular procedures, as it would for an external recruit. To assist in the goal of raising NTT faculty visibility, WiSE will schedule an annual meeting with each department chair to discuss issues about WiSE broadly, that will include discussion of the role of NTT faculty in each program.

WiSE Program recommendations to deans regarding space preparation have been mostly implemented and other improvements are in progress. For example, there is a point person in Viterbi in charge of space preparation for new faculty and the College is considering creating a transition team for each new hire. There is general recognition that space preparation must start immediately after the acceptance of the offer and followed up periodically with the newly hired



faculty before they arrive. Urbashi Mitra (Viterbi) and Hanna Reisler (College) have contacted new incoming WiSE faculty this year and followed up on research space preparation.

Hiring new faculty continues to be the most important goal, and the Board has started an in-depth review of WiSE contributions to this effort, taking into consideration a changing hiring landscape. With the help of the WiSE school committees, the Board continues to pay special attention to the mentoring of WiSE faculty.

In 2007-08, the WiSE Advisory Board held its first joint meeting together with the WiSE school committees on January 30, 2008, to discuss common issues and elected to make this meeting an annual event.

The members of the WiSE Advisory Board include:

Hanna Reisler, Chair Professor, Department of Chemistry USC College of Letters, Arts and Sciences

David D'Argenio Professor, Department of Biomedical Engineering USC Viterbi School of Engineering

Suzanne Edmands Associate Professor, Department of Biological Sciences (Marine) USC College of Letters, Arts and Sciences

Leana Golubchik Associate Professor, Department of Computer Science USC Viterbi School of Engineering

Susan Forsburg Professor, Department of Biological Sciences (MCB) USC College of Letters, Arts and Sciences

Susan Montgomery Professor, Department of Mathematics USC College of Letters, Arts and Sciences

Mark Redekopp Senior Lecturer, Ming Hsieh Department of Electrical Engineering USC Viterbi School of Engineering

Paul Rosenbloom Professor, Department of Computer Science, Information Sciences Institute USC Viterbi School of Engineering

Geraldine Peters Research Professor, Department of Physics & Astronomy USC College of Letters, Arts and Sciences



Katherine Shing

Associate Professor, Mork Family Department of Chemical Engineering & Materials Science

USC Viterbi School of Engineering

School WiSE Committees

Committees composed of faculty in each school serve as advisors on grantmaking by reviewing and evaluating the applications and making recommendations for funding. A summary of the reviews conducted by each committee during the academic year follows:

USC College Committee Reviews 07-08

		Number of	
Program	Deadline	Applicants	Number of Awards
Undergraduate Research	28-Aug-07	8	5
Postdoctoral Support	2-Dec-07	12	1
Undergraduate Research	16-Jan-08	5	5
Graduate Merit	3-Mar-08	5	2
Graduate Top-Off	3-Mar-08	7	4 offered / 1 given
Undergraduate Research	1-Apr-08	6	3 offered / 1 given
Postdoctoral Support	28-Apr-08	1	1

USC Viterbi School Committee Reviews 07-08

		Number of	
Program	Deadline	Applicants	Number of Awards
Undergraduate Research	1-Aug-07	5	5
Postdoctoral Support	15-Aug-07	5	1
Undergraduate Research	15-Nov-07	5	4
Postdoctoral Support	15-Feb-08	0	0
Graduate Top-Off	15-Feb-08	12	4 offered / 1 given
Graduate Merit	3-Mar-08	6	2
Undergraduate Research	1-Apr-08	1	1

In addition to applicant reviews, the Chair of the Viterbi WiSE committee, Urbashi Mitra, has worked closely with the Viterbi dean's office, chairs, and faculty in furthering WiSE goals. She has been invited to attend chairs' meetings, has interacted with associate deans, chairs, and senior staff on space issues of new and current WiSE faculty and has met individually with each junior WiSE faculty in Viterbi discussing needs and plans for career advancement. This serves as an important mentoring function and a conduit to alerting deans and chairs about issues that need to be resolved. In the College, Executive Vice Dean Michael Quick has agreed to serve as the point person for WiSE affairs. Once the reorganization of the College administration under Dean Gillman is complete, it is hoped that the College WiSE committee would also be integrated into the College leadership.



The 07-08 school committees include:

USC College WiSE Committee

Judith Hirsch, Chair

Associate Professor, Department of Biological Sciences (Neuroscience)

Will Berelson

Professor, Department of Earth Sciences

Clifford Johnson

Professor, Department of Physics & Astronomy

Anna Krylov

Professor, Department of Chemistry

USC Viterbi School of Engineering WiSE Committee

Urbashi Mitra, Chair

Professor, Ming Hsieh Department of Electrical Engineering

Steven Nutt

M. C. Gill Chair Professor, Mork Family Department of Chemical Engineering & Materials Science

Ellis Meng

Assistant Professor, Department of Biomedical Engineering

Amy Rechenmacher

Assistant Professor, Sonny Astani Department of Civil and Environmental Engineering

Provost's WiSE Program Office

The WiSE Program is housed in the Office of the Provost, with its physical office located in Grace Ford Salvatori Hall, Suite 315 (GFS-315).

Jean Morrison, Vice Provost for Graduate Programs and Professor of Earth Sciences in the USC College of Letters, Arts and Sciences continues to serve as Director of the WiSE Program. Morrison was appointed as Director in 2002.

Assisting with program development and management and the coordination of committees, Nicole Hawkes serves as WiSE Program Manager.



New WiSE Faculty

For the Fiscal Year 08, 8 offers to WiSE faculty candidates were extended (6 in Viterbi and 2 in the College). Four offers were accepted (3 in Viterbi and 1 in the College). A list of all current WiSE Faculty (07-08) can be found in Appendix 3. The following are new WiSE faculty hired in 07-08:



Sarah Feakins (Ph.D. 2006, Columbia University) Assistant Professor of Earth Sciences (Arriving Fall 08)

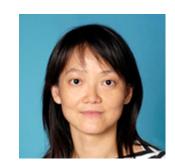
Andrea Hodge (Ph.D. 2002, Northwestern University) Assistant Professor of Aerospace and Mechanical Engineering (Arrived Fall 07)





Michelle Povinelli (Ph.D. 2004, Massachusetts Institute of Technology) Assistant Professor of Electrical Engineering (Arriving Fall 08)

Shinyi Wu (Ph.D. 2000, University of Wisconsin, Madison) Assistant Professor of Industrial and Systems Engineering (Arrived Spring 08)





WiSE Program Awards 2007-2008

Financial awards by program:

Program # Awards Faculty Recruitment / Faculty Retention 2 Major Support for Current Faculty Lloyd Armstrong, Jr. Chair 1 Supplemental Faculty Support 17 Postdoctoral Support 5 Graduate Top-Off 5 Merit Fellowship for Current Ph.D. 4 Travel Grants 56 Undergraduate Research Grants (See: Appendix 8) 21 Child Care Subsidies 4 Support for Faculty Pregnancy / Childbirth / Adoption 1 Support for Ph.D. and Postdoc Pregnancy / Childbirth / Adoption 6

07-08 Recipients of the Major Faculty Support for Current Faculty award include:

Name	Title	School	Proposal
Alice Parker	Professor, Electrical	Viterbi School of	Biomimetic Carbon Nanotube
	Engineering (Systems)	Enginering	Cortex
Feixue Fu	Research Assistant	USC College	Impacts of future rising CO2 and
	Professor, Marine and		temperature on harmful algal
	Environmental Biology		blooms along the California coast

The suite of formal programs established by the original WiSE Task Force in 2000 has remained in place with the addition of several new programs, including the Merit Award for Continuing Ph.D. students and the Accommodation Programs for Pregnancy, Childbirth and Adoption for Ph.D. Students, Postdocs and for Faculty. However, one original program, the "Faculty Matching" award that provided funds toward institutional matching requirements on grant proposals, was not listed on the revised WiSE website in 06-07 because the National Science Foundation eliminated such matching requirements from its programs. It is our understanding that NSF has reinstated matching programs and thus, WiSE may wish to consider such proposals again. Experience in evaluating requests for matching support has shown that it is difficult to administer matching funds in group proposals when there is only one WiSE faculty member as part of a larger group. We look forward to future discussions with the WiSE Advisory Board in guiding the reimplementation of the "Faculty Matching" Program.

In addition to its formal suite of grantmaking programs, costs were incurred in support of program activities (such as the COACh workshops, lecturers, website maintenance, etc.) and administrative expenses. WiSE also awarded several discretionary grants to support activities that work toward the goal of increasing the representation of women in science and engineering. In 2007-08, these include:



Croup	Durnoso
Group	Purpose

Department of Computer	To share expenses for 8 students to attend the "Grace
Science (Viterbi School)	Murray Hopper Celebration of Women in Computing" event
	in Orlando, Florida (October 17-20, 2007)
Women in Physics	To share expenses for the Third Annual Conference for
(USC College)	Undergraduate Women in Physics at USC (January 19-20,
	2008)
Women in Mathematics	To support the annual activities of the networking and
(USC College)	professional development group among graduate and
	undergraduate women in math.

WiSE Activities 2007-08

Lectures

In accordance with the 2006 recommendations of the WiSE Advisory Board for strategies to improve the institutional climate, WiSE hosted its annual distinguished lecturer to increase awareness and visibility of gender equity issues in science and engineering on February 7, 2008.

Computer Scientist and President of Harvey Mudd College, Dr. Maria Klawe, served as the 2008 WiSE Distinguished Lecturer. (See: Appendix 4) President Klawe is renowned for her leadership in promoting women in science, engineering and technology. Her talk, "Gender, Lies and Video Games" reflected on the ways that boys and girls differ in their uses of and attitudes toward computers. The lecture and reception was well attended by faculty and students from across the science and engineering disciplines.

During her campus visit, President Klawe met with President Sample, shared a lunchtime conversation with WiSE faculty, met informally with WiSE graduate students and postdoctoral scholars, and enjoyed presentations by USC faculty in the Computer Sciences Department. Her enthusiasm, encouragement, and fresh ideas were inspiring to all who spent time with her.



President Klawe talks with students



President Klawe talks with faculty

Professional Development

In response to enthusiasm and interest from WiSE faculty and students, the WiSE program sponsored two professional development workshops at USC in 2007-08, designed specifically for



women in science and engineering by the Committee on the Advancement of Women Chemists (COACh).

COACh offers workshops on a number of topics in the area of professional development, leadership training, institutional transformation, effecting change and recruiting and retaining a diverse faculty of top scholars, which have been offered to thousands of scientists and engineers at professional meetings, academic, government laboratories and industry over the past 8 years. The workshops target individuals at all levels, from graduate students through upper level administrators. Workshop facilitators are experienced professionals in human resources, leadership training, teaching, and higher education administration, with successful presentations in many venues including academia.

Two half-day workshops were hosted on each of two dates, on topics related to negotiation and strategic performance; morning workshops were targeted WiSE faculty and afternoon sessions were geared toward Ph.D. students and Postdoctoral Scholars. WiSE covered all costs for participation and workshops were held at the Davidson Conference Center. Faculty sessions were well-attended and student/postdoc sessions were full to capacity with an extensive waiting list. Program evaluations reflected very positive responses and demand for additional professional development opportunities.

Workshop 1: Friday, November 30, 2007

"COAChing Strong Women in the Art of Strategic Persuasion: Seminar in Negotiation Skills and Conflict Resolution"

Facilitators:

Barbara Butterfield, Ph.D

Over 35 years as an executive in higher education. She is executive consultant to the University of Michigan, senior consultant to the Segal Company. Dr. Butterfield is a consultant educator in the area of faculty development for both COACh and Advance Programs supported by grants from the National Science Foundation.

Jane Tucker, Ph.D

Works at Duke University in the area of change management and is also president of Jane W. Tucker & Associates. She has over 25 years of experience working with leaders in higher education and industry. Her interests include negotiations, coaching individual leaders and change management.

Workshop 2: Friday, March 28, 2008

"COAChing Strong Women in the Art of Strategic Performance"

Facilitators:

Lee Warren, Ph.D

Associate Director of the Derek Bok Center for Teaching and Learning at Harvard University where she is a pedagogical coach for faculty and graduates students. She teaches leadership for the Kennedy School of Government Executive Programs and has consulted to national and international organizations for 25 years.



Nancy Houfek, M.F.A.

Head of Voice & Speech for the American Repertory Theatre at Harvard University. A stage director, award-winning actor, and nationally recognized theatre educator, she brings 30 years of working with performers and public speakers to her partnership with COACh.

Other Activities

WiSE Community Picnic

At the initiation of the WiSE Postdoctoral Association, WiSE hosted its first Community Picnic on Sunday, August 26, 2007 at the Kenneth Hahn State Recreation Area in Los Angeles. Faculty, students and postdocs gathered together with their families and friends to celebrate the beginning of the new academic year.



Picnic attendees enjoyed a barbeque lunch



Families, friends, and pets were invited

WiSE Library Tour and Orientation

USC Science and Engineering librarians Sara Tompson and Jean Crampon provided an introduction to electronic resources and library facilities to assist faculty and students at various points in the research process. Topics of discussion included: use of new databases and search engines; helpful resources for literature review; resources for citation analysis; and discussion of pre and/or post print storage and rights. Participants enjoyed lunch and conversation in the 2nd Floor library conference room, following the formal presentation.



Participants in the tour enjoyed lunch with the Librarians



WiSE Forums for Earth Sciences Graduate Students

At the request of the Earth Sciences Department, WiSE hosted two forums with WiSE Ph.D. students on January 22 and February 13, 2008. The meetings, facilitated by WiSE faculty, Suzanne Edmands, Susan Forsburg, and Jean Morrison, provided a comfortable environment for the discussion of issues related to being women in science with questions and discussion. Participants provide valuable feedback on their experience at USC in the Department of Earth Sciences and how the WiSE Program can better work to support scientists on campus.

Recruitment

The WiSE "toolkit" of resources for hiring diversity for department chairs and search committees (developed in 06-07) continued to be widely distributed through WiSE meetings with department chairs and search committee representatives in both the USC College and Viterbi School of Engineering in 2007-08. (See: Appendix 5) The toolkit outlines recommended strategies for broadening the scope of searches for outstanding diversity candidates.

As in the previous academic year, WiSE leadership offered to meet with women faculty candidates both to transmit information about the WiSE program and resources and to provide opportunities for candidates to ask questions about USC and work-family issues that they might not ordinarily feel comfortable discussing as part of their formal interview process. Departments took full advantage of this offer and senior WiSE faculty met with 20 faculty candidates over the course of 2007-08. The list of candidates is contained in Appendix 6.

The following is a breakdown of candidates who met with WiSE representatives as part of their campus interview by school and department:

USC College

Department	# Candidates	
Biological Sciences		2
Chemistry		1
Earth Science		7
Kinesiology		0
Mathematics		0
Physics &		
Astronomy		1
Total:		11

Total: П

Viterbi School

# Candidates	
	0
	0
	0
	2
	1
	2
	1
	3
	# Candidates

Total:



Presentations and Off-Campus Visibility

As part of the effort to increase the visibility of the WiSE program both on the USC Campus and nationally, WiSE representatives attended conferences, workshops and events to broadly share information about the WiSE program with the larger public. These events included:

Date	Event	Participants
8/30/07	USC Graduate School's Graduate	Nicole Hawkes delivered overview of
	Advisors Meeting, presentation on	WiSE program and opportunities for Ph.D.
	WiSE programs	students
9/27/07	SPIE "Women in Optics" invited	Jean Morrison delivered presentation;
	lecture on WiSE at USC at annual	Nicole Hawkes attended (See: Appendix 7)
	conference in San Diego	
10/13/07	Sally Ride Science Festival for Girls	Postdoctoral scholars Melania Oana
	at California State University, Los	(Chemistry) and Sarah Sabatinos (Biology)
	Angeles – "Street Fair"	presented interactive demonstrations and
		teaching resources.
1/15/08	AAUW (American Association of	Nicole Hawkes and WiSE Undergraduate
	University Women) "Women in	Fellow, Brittney Miller (Physics) delivered
	Technology" Program at the Torrance	presentations. (See: Appendix 9)
	Civic Center Library, invited	
	presentation on WiSE and	
	Undergraduate Research	
1/16/08	Invited presentation to the USC	Nicole Hawkes delivered presentation.
	Center for Work and Family Life	
	Advisory Committee on Work, Life	
	and Wellness Programs	
1/24/08	Invited presentation to the USC	Jean Morrison, Hanna Reisler, Nicole
	College Department Chairs and	Hawkes led discussion.
	Search Committees	
2/14-	AAAS (American Association for the	Nicole Hawkes attended
2/18/08	Advancement of Science) Annual	
	Meeting, Boston, MA	
2/29/08	Marlborough School "Women in	Postdoctoral scholar Veronica Santos
	Science" Panel for 9-12 th grade girls	(Biomedical Engineering), panelist
4/17/08	USC Earth Sciences Professionalism	Jean Morrison, panelist
	Panel: "Minorities in Sciences: the	
	Difficulties Facing Underrepresented	
	Students in Earth Sciences"	





Jean Morrison (far right) with SPIE leaders



Brittney Miller (far left) and Nicole Hawkes (second from right) with AAUW Panelists

WiSE Faculty Awards and Distinctions

Articles featuring WiSE faculty are continuously assembled in a chronological archive to chart their outstanding accomplishments. As outlined in Provost's 2007 initiative on Faculty Recognition (3/19/07), bringing the achievements of USC faculty to the "attention of wider circles will support the ongoing recruitment by all departments of additional excellent faculty and graduate students." It is our hope that highlighting the outstanding work of WiSE faculty at USC will contribute to our recruitment goals.

Accomplishments by WiSE Faculty in 07-08 are listed below:

Name	Department	Accomplishment
Susan Friedlander	Mathematics	Associate Secretary of the American
		Mathematical Society
Susan Forsburg	Biological Sciences	Elected Fellow of the USC Center for
		Excellence in Research
Yolanda Gil	Computer Science, ISI	Recognized as 2008 "Remarkable Woman"
		by the USC Women's Student Assembly
Leana Golubchik	Computer Science	Member, USC Academic Senate Executive
		Board
Leana Golubchik	Computer Science	Associate Chair for Ph.D. Programs
Maja Mataric	Computer Science	Senior Associate Dean for Research in the
		Viterbi School of Engineering
Maja Mataric	Computer Science	Elected Fellow of American Association
		for the Advancement of Science (AAAS)
Maja Mataric	Computer Science	Immediate Past-President of the Academic
		Senate and the USC Faculty
Maja Mataric	Computer Science	Elected to Phi Kappa Phi Academic Honor
		Society
Ellis Meng	Biomedical Engineering	Appointed to the Viterbi Early Career
		Chair in the Viterbi School of Engineering
Urbashi Mitra	Electrical Engineering	Elected Fellow of the Institute of Electrical
		and Electronics Engineers (IEEE)
Urbashi Mitra	Electrical Engineering	Officer, IEEE International Conference on
		Acoustics, Speech and Signal Processing



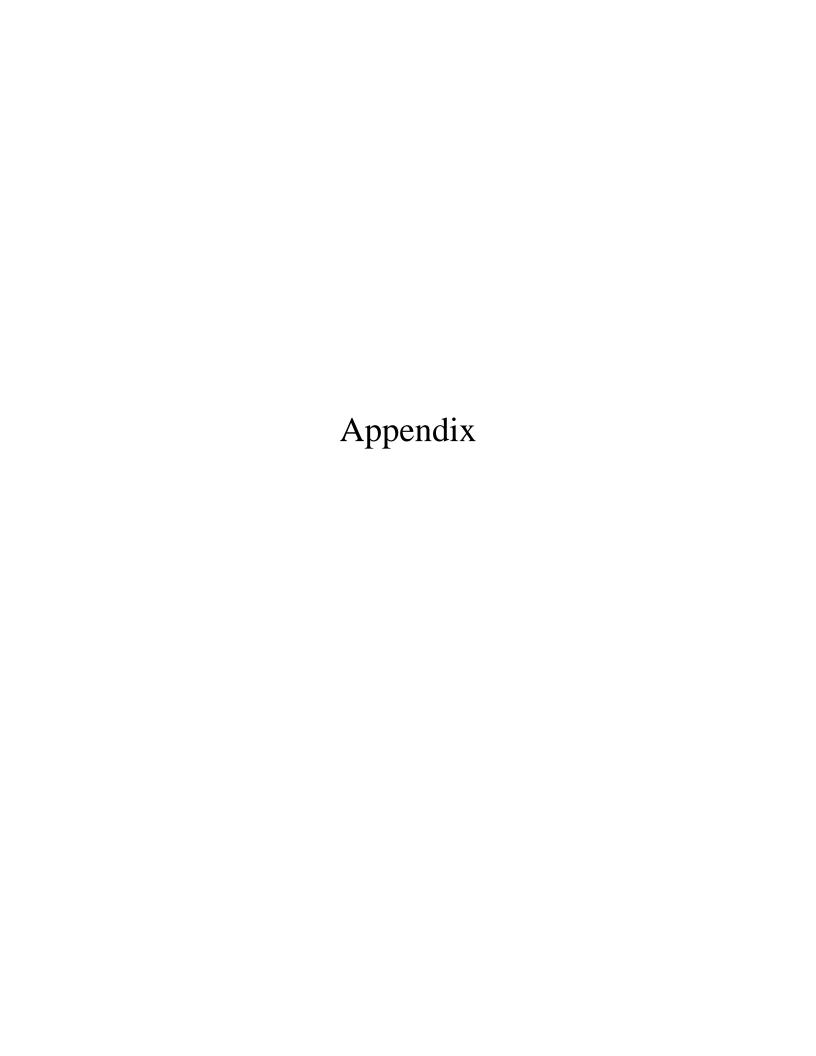
Urbashi Mitra	Electrical Engineering	Awarded USC Mellon Mentoring Award for Faculty-to-Faculty mentoring
Jean Morrison	Earth Sciences / Provost's Office	Elected as Member-at-Large on the Association of Graduate Schools (AGS) Executive Committee
Jean Morrison	Earth Sciences / Provost's Office	Recognized as 2008 "Remarkable Woman" by the USC Women's Student Assembly
Geraldine Peters	Physics & Astronomy	Served on a NASA 2008 Senior Review panel that recommended funding for currently operating astrophysics missions such as X-Ray observatories and space telescopes.
Amy Rechenmacher	Civil & Environmental Engineering	Awarded NSF Early Career Development Award (CAREER)
Lorraine Turcotte	Kinesiology / Biological Sciences	Awarded USC Mellon Mentoring Award for Faculty-to-Graduate Student mentoring
Xianghong Jasmine Zhou	Biological Sciences	Awarded NSF Early Career Development Award (CAREER)



(L-R) Lorraine Turcotte, Urbashi Mitra, and Hanna Reisler at the Mellon Mentoring Reception



Yolanda Gil and her daughters and Jean Morrison at the "Remarkable Women" awards ceremony



Appendix 1: Article featuring WiSE at USC in January 2008 American Society of Cell Biology Newsletter

WOMEN in Cell Biology



Improving the Climate for Women in Academia

"At a time when the nation is concerned about training enough health care givers and research scientists for the coming decades, academic science and medicine appear to be in danger of wasting more than half of their capital—their women faculty," concludes a recent report from the National Academies. 1-2 But perhaps needed change is coming. Many institutions are seeking ways to promote women's advancement by creating a more favorable academic climate.

Some important recent efforts to understand and change institutional climates that may impede the careers of women scientists and engineers include:

- Thirty institutions have received National Science Foundation ADVANCE Institutional Transformation Awards, which seek "to develop systemic approaches to increase the representation and advancement of women in academic science and engineering careers."3
- Five leading medical schools, along with Brandeis University and the American Association of Medical Colleges, have launched a landmark five-year study to explore and address the dramatic underrepresentation of women and minority faculty in leadership and senior positions in academic medicine.² This National Initiative on Gender, Culture, and Leadership in Medicine (also known as "C-Change" for cultural change) is supported by a \$1.4 million grant from the Josiah Macy, Jr., Foundation of New York.
- The University of Southern California received a gift of \$20 million to create the Women in Science and Engineering Program to increase the number of women in tenured and tenure-track faculty positions.⁴

One noteworthy and successful effort to assess and improve the academic climate for women (and for all faculty) is taking place at the University of California, San Francisco (UCSF). The effort began when Chancellor J. Michael Bishop asked his top leadership to develop a Faculty Climate Survey and to include comparisons between women and men. Starting with questions that Nancy Hopkins and her colleagues had used at the Massachusetts Institute of Technology, UCSF

officials developed a survey that was refined and administered by a professional polling firm in 2001.⁵ A faculty committee appointed by the chancellor, with representatives from each of the four schools, analyzed the results and forwarded 10 recommendations to the chancellor in 2003.⁶

The chancellor accepted all 10 recommendations. A Chancellor's Council on Faculty Life was appointed in late 2003. Under the leadership of the vice provost for academic affairs (originally Dorothy Bainton, now Sally Marshall), the council is responsible for implementing the recommendations, thereby ensuring high-level support for these activities.

Some of the positive results so far include a change in tenure policy with respect to maternity, establishment of programs to support new and existing faculty, and institutional recognition of the importance of enhancing diversity.

One reform was the creation of a new policy under which the tenure clock automatically stops, systemwide, if a faculty member takes maternity leave. The chancellor's office compensates departments for the first six weeks of this paid leave. An additional six weeks of leave is available without such compensation.

In keeping with the recommendations of the committee that reviewed the faculty survey, several new programs are in place to support faculty. First, there are now both institutionwide and intradepartmental welcoming activities for all new faculty. A daylong program covers topics as varied as compensation and benefits, childcare, faculty review processes, mentoring, retirement, teaching skills, and managing difficult work situations.⁸

Another new program to support faculty is the UCSF Faculty Mentoring Program, which was established in 2006 with the goals of:

- Supporting the recruitment and retention of the highest-quality faculty
- Increasing faculty diversity through improved mentoring of underrepresented faculty
- Improving faculty career satisfaction and

Mitchell D. Feldman was appointed to the halftime position of director of faculty mentoring and is working closely with the Chancellor's

Some of the positive results so far include a change in tenure policy with respect to maternity, establishment of programs to support new and existing faculty, and institutional recognition of the importance of enhancing diversity.

Council on Faculty Life to establish and oversee a mentoring program for all UCSF faculty. All assistant professors and new faculty have mentors; more than 800 have been matched to date. Mentors and their protégés meet at least twice a year to review the protégé's updated curriculum vitae and individual development plan. Each department has at least one mentoring facilitator, with almost 80 such appointments in place. Workshops are being developed to train both mentors and facilitators. Protégés are enthusiastic about the new program, saying, "I applaud the institutionalization of the mentoring program at UCSF," and "I think that the mentoring program is fabulous."

A third new program to support and advance faculty careers is a substantive new-faculty leadership development program launched in 2005. Funded by the Chancellor's Council on Faculty Life, the UCSF Faculty Leadership Collaborative was developed by the Coro Center for Civic Leadership, a nationally recognized leadership training organization. The program is designed for UCSF faculty who want to build community awareness and knowledge as well as their personal and professional leadership skills. More than 60 individuals have already received this training, which will be offered periodically.

Finally, a faculty enrichment pilot program aimed at stress management and reduction has recently been completed, and the initial results are positive. This program supplements the many supportive resources available through the UCSF Work-Life Portal.9

Nurturing and enhancing diversity is now recognized as an important component of the UCSF strategic plan. ¹⁰ A faculty search ambassador position, initially established two years ago, has been made part of a broader, UCSF-wide diversity initiative. J. Renee Navarro was appointed director of academic diversity in August 2007 to lead UCSF's efforts to nurture and enhance diversity among faculty and trainees, who include students, residents, and postdoctoral scholars.

To test whether these interventions have improved the climate for all faculty, and especially for women, UCSF plans to repeat the 2001 Faculty Climate Survey in a few years. "I am very pleased with the results of the programs instituted by the Chancellor's Council on Faculty Life through the Office of Faculty Development and Advancement," says Vice Provost Marshall. "It has been a great experience—from the initial support by Chancellor Bishop through the active participation by our faculty and their appreciation of the programs."

Clearly, to facilitate women's careers we must reform what the National Academies report calls "gender and racial/ethnic bias and outmoded 'rules' governing academic success." However, with efforts like those at UCSF and other institutions, women can be and should be encouraged to pursue careers in all branches of academic science and medicine, without fear of becoming part of the "wasted capital."

—W. Sue Shafer Consultant, Women's Careers In Science [W]ith efforts like those at UCSF and other institutions, women can be and should be encouraged to pursue careers in all branches of academic science and medicine, without fear of becoming part of the "wasted capital."

References

¹Committee on Maximizing the Potential of Women in Academic Science and Engineering, National Academy of Sciences, National Academy of Engineering, and Institute of Medicine (2007). Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering. Washington, DC: National Academies Press

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ASCB NEWSLETTER JANUARY 2008

Appendix 2: Article on WiSE in U.S. News and World Report "America's Best Graduate Schools" 2009 Edition



America's Best CRADUATE SCHOOLS

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Back-to-School Days, for Adults

Things to look for in a graduate school if your college days are long behind you

By Christopher J. Gearon

Whittier, Calif., bookkeeper and 37-year-old mother dreams of becoming a volcanologist, while a 48-year-old District of Columbia attorney wants a new career in real-estate development. In Murfreesboro, Tenn., a former Army enlistee and 26-year-old father of five sees financial planning in his future. All three are in graduate school.

Today's grad student typically starts an advanced-degree program long after the traditional undergraduate-to-graduate student has finished. Nearly half of all grad students enroll between ages 24 and 35, according to the Council of Graduate Schools; one quarter start at age 36 or older. Most have real-world work experience. About a third are raising children.

Here's the rub: Many grad schools have been slow to accommodate nontraditional graduate learners. "Universities have failed to look at the demographics of their graduate students," says Carol Ann Baily, director of Off-Campus Student Services at Middle Tennessee State University in Murfreesboro. "That's because they would have to do something about it."

Baily has given the issue a lot of thought: She's the former chair of the National Academic Advising Association's Advising Adult Learners Commission. Too often, she says, support services are structured for young adults—full-time students whose lives revolve around campus. As a result, nontraditional students often confront advisers who keep banker's hours, a lack of prep classes, and little empathy from faculty about balancing work, family, school, and commuting.

Richard Denney, a former Army combat engineer with five kids, relies on his grad school for help. At Middle Tennessee State, where he is pursuing an M.B.A. at night, nontraditional students have their own resource center and lounge. A student organization called OWLs, for Older Wiser Learners, offers time-management workshops and adult-learning confer-

Lisa Alpert (right) of USC with husband How and daughters Francesca (left) and Angelina ences; advice ranges from financial aid to stress-management seminars.

In Las Cruces, N.M., New Mexico State offers courses for older students in time management, speed-reading, and writing to reorient those who are rusty when it comes to hitting the books. "While Igrad students] tend to be excellent students, they need to retool their study and comprehension skills," says Linda Lacey, dean of the university's graduate school. Nontraditional students "really do present a different set of issues," remarks Jean Morrison, vice provost of graduate programs at the University of Southern

California. Child care and health insurance can be big distractions, she says, but "universities, by and large, are slow to come around to a family-friendly model." After USC re-examined its policies in 2005, its graduate school established a Center for Work and Family Life. Like many other schools, it offers health insurance—and struggles with how to make this affordable for older students.

Lisa Alpert, a USC Ph.D. candidate in geology and the mother of two toddlers, hadn't planned to pursue a Ph.D. at all. "I felt I was too old," she says. But a field trip during her master's work changed



that; a professor encouraged her to apply, adding the magic words: "We pay you." Alpert is now immersed in "the insides of volcanoes and subduction zones"; she hopes to work for the U.S. Volcano Disaster Assistance Program.

WISE move. Alpert feels she struck gold at USC. Through an initiative called Women in Science and Engineering, or WISE, created by a \$20 million gift to increase the numbers of women in science, math, and engineering, Alpert gets her tuition, plus a \$4,000 stipend toward child care. As a result, Alpert's 3-year-old gets day care three times a week. In return, Alpert teaches 20 hours a week.

Some grad students think older is wiser. "It's a lot easier psychologically when you go back to school at this point in life," says Ronee McLaughlin, a 48year-old Washington, D.C., attorney and real-estate investor working on a master's in real-estate development at the University of Maryland. Besides, her graduate program "assumes people are working," McLaughlin says; required courses are offered in the evening, Maryland offers several programs and services for nontraditional students, including child care and an organization called Graduates as Parents.

Initially, McLaughlin applied to the executive M.B.A. program at Maryland's business school, only to find that it cost \$89,000. "It was too expensive," she said. Instead, a grad school dean recommended she pursue a two-year master's: It was cheaper, and it fit her interests better. Now she's tackling the hardest part of going back to school, the technology—an experience that has created a bond between the mother and her 10-year-old daughter. "She certainly enjoys seeing me struggle with my homework," says McLaughlin. •



Finding Time for the Family

The fine art of convincing the kids it's all under control

ou're in your 30s or 40s with a decent-paying job, a spouse, and kids, and you get an overwhelming urge to go back to school. What will your spouse think about this? Here are two possibilities: You'll quit your job or go part time (result: Your income will drop), or you'll keep working (result: You'll never be around to watch little Amanda).

"You've got to get the buy-in and support of your family. If you don't have that, it's very hard to be successful," says Gabe DeGabriele, a consultant with the Association for Non-Traditional Students in Higher Education. Twe seen marriages dissolve, and I've seen marriages get stronger" when a spouse goes to grad school.

Buty roster. At Middle Tennessee State, Richard Denney (story, left) and his wife, Monique, a full-time pre-med student, share responsibilities. They have five kids: He does days, she has night duty, and they share the cooking and cleaning.

Keeping chores straight is one thing, but remembering to be there when family members need you is crucial. DeGabriele says talking about expectations is a good start; so is scheduling time for your spouse and each child. "I know a couple who made date nights out of grocery shopping," DeGabriele says. It's also important for family members to support the returning student, which raises some wonderful opportunities for role reversal-asking the parental student how school was that day or taking kids to class occasionally.

Be careful about letting tests or papers interfere with family time. "As soon as you've taken that away, you've lost their support," DeGabriele says. -C.J.G. The USC Women in Science and Engineering Program



2008 WiSE Distinguished Lecturer

Dr. Maria Klawe

President of Harvey Mudd College



"Gender, Lies, and Videogames"

Thursday, February 7, 2008 4:00 p.m. – 5:00 p.m. Hedco Neuroscience Auditorium (HNB 100) Reception to follow in HNB 107

Contact WiSE at (213) 821-4400 for more information
Or visit www.usc.edu/wise



Appendix 5: USC Search Committee "Toolkit"

Increasing Faculty Diversity: Tips to Chairs and Search Committees

Developed by the USC WiSE Program

The search for a new faculty member is both routine and unique. The procedures are the same no matter what position or department: advertise, review applications, interview, and hire. However, each position has specific qualities, and departments will define their own selection criteria and candidate qualifications.

This document identifies the major components of the search process from the perspective of increasing faculty diversity, and offers suggestions on how departments can modify the process to reflect their special hiring needs, while at the same time strive to increase diversity. These search tips for department chairs and search committees are adapted from those developed at other universities by NSF ADVANCE programs on institutional transformation and conform to search procedures at USC.

As a first step to increase diversity, think beyond the immediate search steps as you develop your procedures. Just as your department is trying to find the best candidate, applicants are judging whether they want to come to USC and build their careers here.

Before the Search

- Create a search committee that is enthusiastic and genuinely committed to faculty diversity. Include individuals with different expertise, and at least one senior faculty who is from an underrepresented group.
- Include diversity goals in the departmental strategic plan, as well as in its the mission statement.
- Distribute a departmental statement outlining meaningful steps to be taken to achieve greater diversity among the faculty, drawing on your department's appraisal of diversity needs.
- Critically analyze the job description and advertisement, making sure that they are geared towards inclusiveness.
- Clearly articulate campus rationale for support of faculty racial and ethnic diversity by
 making explicit the connection between faculty diversity, excellence and educational
 goals.

The Search Committee

- Make sure the committee is diverse, even if this broadens the scope of the committee beyond the professional goals set by the search.
- Identify key members who will serve as advocates for women and minorities.
- Ask dean, chair, and WiSE committee members to meet with the search committee at the
 beginning of the process to reiterate the importance of increased diversity and provide
 guidance on increasing the diversity of the applicant pool and minimizing subconscious
 biases in selecting candidates.



• Identify ways in which a diverse pool of candidates will be attracted.

Planning the Search

- Meet with the appropriate faculty to establish specific hiring goals. Determine how much
 you are willing to broaden the scope of the search for a candidate from an
 underrepresented group. Develop a clear position description that includes the possibility
 of a broadened scope.
- Develop a timeline for recruiting and interviewing that takes into account the reality that
 excellent diversity candidates are sought after by many schools and their interview
 calendar fills up early.
- Determine and document how the committee plans to actively recruit women and minorities. Examples include:
 - (i) Develop a process for committee members or departmental faculty to make personal contact with potential candidates at professional meetings and conferences;
 - (ii) Utilize personal and professional networks, contacts, and recommendations to seek leads to potential minority candidates. Do not call only faculty at top-ranked universities. Some excellent diversity candidates get their education at other universities, because they are more often restricted by family or financial considerations; and
 - (iii) Advertise what USC is doing to foster the careers and women and minorities, and encourage candidates to apply to USC.
- Be clear on what the role of the committee is. In some cases the committee is authorized only to recommend the final candidates to be invited for interviews. In others, the committee identifies the candidates, coordinates the on-campus interview process and makes a hiring recommendation to the appropriate chair or dean. Make sure that the chair and the faculty who are designated to look at diversity candidates look at the entire pool of highly ranked candidates to help in short-listing diversity candidates.
- Having diversity in mind from the start will minimize biases in selecting candidates for
 the short list. Have each member of the committee read an article about hidden biases that
 influence decision making subconsciously. Educate the search committee and provide
 opportunities for discussion on diversity and equity issues, including hiring myths,
 stereotypes, and biases.
- Incorporate recruitment networking into professional conference attendance by department faculty.

Evaluating the Applicant Pool

- Include all committee members in the evaluation process of the entire pool.
- Develop a written list of selection criteria and a process for rating candidate applications.
 Research shows that having a written list of criteria helps minimize subconscious biases.
 Reach committee consensus on how different qualifications will be weighted. Make sure that the criteria include diversity and minimize the role of prestige of institution and adviser in selecting candidates. The key is to look at the credentials of each candidate without bias.
- Identify the top 25% of the candidate pool, and review how well each applicants' experience and commitment to diversity can contribute to the institution's diversity goal or to increasing the representation of women in the department.



• Keep records on the applicant pool and how it was short listed. These records can be shown to deans, department chairs, future search committees, etc. This will create a departmental culture that emphasizes diversity with excellence.

Interviewing the Finalists

- Consider interviewing more than one woman. Research shows that interviewers more fairly evaluate women when there is more than one woman in the candidate pool (Valian, Virginia (1999) *Why So Slow? The Advancement of Women.* Cambridge, MA: The MIT Press. See especially Chapter 7).
- Women and minority candidates often perceive the interview differently than other candidates. Make sure these candidates are interviewed by faculty who are sensitive to their perspective. Include women and minority among those seen by the diversity candidate, even if they are not from your department. Consult with the WiSE program director, your dean or the provost's office if you need help in identifying such faculty. Offer to make available a person of similar background, interests, ethnicity, or gender to give their perspectives on the campus and city climate.
- Read on how different types of candidates view differently the interview and offer. this will help bring up issues that would not be normally emphasized. These may include networking groups on campus, child care facilities, family friendly policies, etc.
- Make sure each member of the search committee is familiar with policies of family leave, tenure clock, etc., which affect more often diversity candidates.
- Offer all candidates information on who to contact to discuss special requirements or circumstances, such as the need for partner job assistance or disability accommodation, *if* the candidate raises such issues.

Concluding the Search

- Solicit written comments from all those that met with or interviewed candidates, including those who were not from your department. A rating form can be developed for this purpose that will include desired area, benefit of increased diversity, etc.
- If a diversity candidate rises to the top, inform your dean who will contact the WiSE program and the provost's office to generate an attractive offer.
- After the selection, stay in frequent contact with your top choice and the first alternate. Find out what other offers they have, so that your offer stays competitive at all times.

Resources

"The Department Chair's Role in Developing New Faculty into Teachers and Scholars" (Paperback), by <u>Estela Mara Bensimon</u>, Kelly Ward, Karla Sanders, Anker, 2000; available from Amazon.

NSF-ADVANCE web sites: See links in http://www.usc.edu/programs/wise/resources/links/.

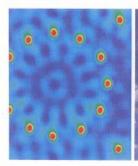
Appendix 7: WiSE Lecture Description from SPIE Conference Agenda



Technical Program

Conferences + Courses: 26-30 August 2007 Exhibition: 28-30 August 2007

San Diego Convention Center San Diego California USA









Social and Networking Events



All-Conference Welcome Reception

Convention Center Upper Level Terrace

Poster Sessions

Convention Center Ballroom 20C/D

Monday 27 August 6:00 to 7:30 p	mc
Tuesday 28 August	mc
Wednesday 29 August 5:30 to 7:00	mc

Conference attendees are invited to attend the poster sessions on Monday, Tuesday, and Wednesday evenings. Each evening will represent a different set of conferences. Come view the posters, ask questions, and enjoy the refreshments. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Authors: See setup instructions on p. 28

Women in Optics Presentation & Reception

Convention Center Room 33C

Monday 27 August 5:00 to 6:30 pm

Open to all conference attendees; refreshments will be served. Look for location information in the Final conference program.



Dr. Jean Morrison, Vice Provost for Graduate Programs, Professor of Earth Sciences, Director of the Women in Science and Engineering (WiSE) Program, University of Southern California

The Women in Science and Engineering Program at USC: Programs and Progress 2000 - 2007

The establishment of the Women in Science and Engineering (WiSE) Program represents the serious commitment of the University of Southern California to address the under-representation of women in science and

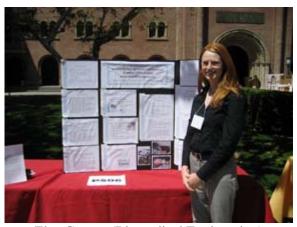
to address the under-representation of women in science and engineering. Since the launch of the program in 2000 with a \$20 million gift to the endowment, WiSE has helped to more than double the number of tenured and tenure-track women faculty in the natural sciences, math, and engineering at USC through its faculty recruitment and retention programs. Its complimentary programs to address "pipeline issues" in support of undergraduates, graduate students, and postdoctoral scholars in these fields through a range of financial awards and activities have also grown in scope and impact. She will discuss the programs developed and administered by WiSE to address the obstacles to women's successe in academic science and engineering. She will relay the perceived successes to date, and the challenges that remain in striving for gender equity in science and engineering at USC and beyond.

Biography: Jean Morrison is the vice provost for graduate programs with primary responsibility for oversight of the university's graduate affairs and of the USC Graduate School. Since 2002, she has overseen the Women in Science and Engineering (WiSE) program, which enables USC to address fundamental Issues that hinder the hiring and retention of women in science and engineering. Since the program's inception in 2000, the number of tenured and tenure-track women in these fields at USC has doubled. A professor of earth sciences, Morrison is a metamorphic petrologist whose research addresses how the earth's crust evolves over time. In particular, she studies the isotopic composition of rocks and minerals to understand the role that fluids play in fault systems. She served as an editor of the Journal of Metamorphic Geology and as an associate editor of the American Mineralogist and the Geological Society of America Bulletin. She received her Ph.D. from the University of Wisconsin, Madison, in 1988, her M.S. from the University of Wisconsin, Madison, in 1988, her M.S. from the University of Hospital States of the Husband, Professor Lawford Anderson, have 2 young children, Sarah, age 11 and James, age 8.

Appendix 8: WiSE Undergraduate Research Fellows 07-08 Presentations at the 2008 Undergraduate Symposium for Scholarly and Creative Work April 9, 2008



Aminat Adebiyi (Biomedical Engineering) and Professor Satwindar Sadhal



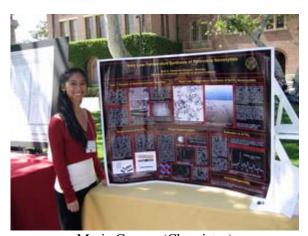
Elea Grotter (Biomedical Engineering)



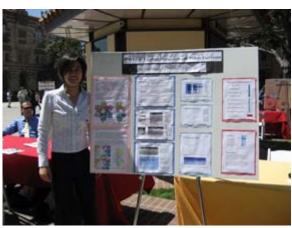
Elizabeth Andrews (Kinesiology) and her research partner, student David Joiner



Natasha Naik (Biomedical Engineering)



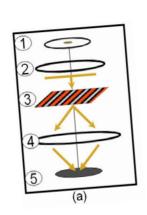
Marie Cuevas (Chemistry)



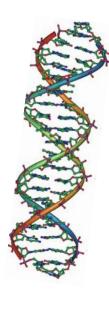
Shen Soh (Chemical Engineering

Appendix 9: AAUW Women in Technology Program Flyer

THE TORRANCE BRANCH OF THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN & the TORRANCE PUBLIC LIBRARY Present







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- Dr. Christine Hoffman, Superintendent, SCROC (Southern California Regional Occupational Center)
- <u>Idania Reyes</u>, Women in Industry & Technology Program Manager, El Camino Community College
- <u>Dr. Antonia Boadi</u>, Professor of Computer Science, California State University Dominguez Hills
- <u>Nicole Hawkes</u>, Women in Science & Engineering Program Manager, University of Southern California

describe programs that can put girls on track for fulfilling careers in science and technology, beginning with high school technical courses, offered for credit at SCROC, to one to four year certificates and degrees offered at our community colleges and universities.

Free of charge and open to the public.

Tuesday, January 15, 2008, 6:30 pm
Katy Geissert Civic Center Library
Community Meeting Room
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