

USC WOMEN IN SCIENCE AND
ENGINEERING

ANNUAL REPORT 2016-2017

PROGRAM DIRECTOR,
PROFESSOR LEANA GOLUBCHIK

PROGRAM MANAGER,
MALLORY REDEL

Office of the Provost

University of Southern California

1042 Downey Way, DRB 140

Los Angeles, CA 90089-1111

(213)-740-0996

wise.usc.edu

wiseprog@usc.edu



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Executive Summary

The USC Women in Science and Engineering Program (WiSE) is USC's premiere diversity initiative. Founded in 2000 by an anonymous donation of \$20 million, WiSE is an endowed initiative aimed at increasing the representation of women in tenured and tenure-track faculty positions in the sciences, engineering, and mathematics at USC.

Since the program's inception, WiSE has successfully helped to increase the number of women in these positions in the programs it represents -- the departments of engineering in the USC Viterbi School of Engineering (VSoE) and the departments of mathematics, biological sciences, earth sciences, physics and astronomy, and chemistry in the USC Dana and David Dornsife College of Letter, Arts and Sciences -- from 15 in 2000 to 58 in August 2017 (See Appendix 1). By targeting the recruitment and retention of new women faculty members and by establishing a suite of programs aimed specifically at creating an environment in which women at all stages of their careers may thrive, WiSE serves as a role model for successful diversity efforts at USC, as well as across the country and internationally.

Total WiSE contributions for the 2016-2017 academic year amounted to \$818,077.00 disbursed through 224 grant awards, including maintenance of the Lloyd Armstrong, Jr. Endowed Chair, held in 2016-2017 by Hanna Reisler, Professor of Chemistry.



Professor Hanna
Reisler, Lloyd
Armstrong, Jr.
Endowed Chair

During the 2016-2017 recruitment season, WiSE helped add **three new women to the tenure-track faculty**. VSoE welcomes Assistant Professors **Bistra Dilkina** (Computer Science), and **Heather Culbertson** (Computer Science), and the Dornsife College of Letters, Arts and Sciences welcomes Associate Professor **Rosa di Felice** (Physics and Astronomy).

WiSE continues to play 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 during campus visits. During the 2016-2017 academic year, WiSE leadership participated in meetings with 21 formal candidates during their campus visits (10 in Viterbi and 11 in Dornsife) (See Appendix 2). WiSE Support for Facilitating Diversity in Faculty Searches provided 6 grants totaling \$23,275.00 to the departments of Electrical Engineering, Biological Sciences (Molecular and Computational Biology), Chemistry, Earth Sciences, Physics and Astronomy, and Mathematics.

WiSE Faculty Accomplishments

Current WiSE faculty members continue to distinguish themselves with campus-wide and national level recognition for their research. In the Viterbi School of Engineering, Assistant Professor **Nora Ayanian** (Computer Science) received the 2016 Okawa Foundation Research Grant. This prize honors top researchers working in the fields of information and telecommunications. In addition, she was selected by the MIT Annual Review for its 2016 list of 35 Innovators Under 35, and she was appointed as an Andrew and Erna Viterbi Early Career Chair. Assistant Professor **Kelly Sanders** (Civil & Environmental Engineering) was named by the MIT Annual Review as one of 2016's 35 Innovators Under 35. She was also



Left to right: Professor Yan Liu,
Vice Provost Elizabeth Graddy

appointed as a Dr. Teh Fu Yen Early Career Chair. Associate Professor **Yan Liu** (Computer Science) was appointed as holder for the Philip and Cayley MacDonald Endowed Early Career Chair. She also received a 2017 USC Mentoring Award in the *Faculty Mentoring Graduate Students* category. Assistant Professor **Minlan Yu** (Computer Science) was selected for the inaugural list of “10 Women in Networking/Communications that You Should Watch”. Associate Professor **Michelle Povinelli** (Electrical Engineering) was elected Fellow of the Optical Society (OSA), “For contributions to the theory and application of light forces in optical nanostructures and for the understanding and realization of nanostructures for solar energy conversion.” Professor **Mahta Moghaddam**

(Electrical Engineering) received the NASA Honor Award: Outstanding Public Leadership Medal and she was appointed to the William M. Hogue Professorship in Electrical Engineering. She was also appointed as the USC Viterbi School of Engineering's Director of New Research Initiatives. Associate Professor **Burcin Becerik** (Civil & Environmental Engineering) received a 2017 USC Mentoring Award in the *Faculty Mentoring Undergraduate Students* category. Assistant Professor **Stacey Finley** (Biomedical Engineering) received the inaugural Leah Edelstein-Keshet Prize from the Society for Mathematical Biology. This award recognizes a woman in an early stage of her career who is making exceptional scientific contributions to mathematical biology, developing a strong independent research program, and exhibiting a continuously high level of scientific endeavor and leadership. She was also appointed as a Gordon S. Marshall Early Career Chair. Assistant Professor **Megan McCain** (Biomedical Engineering) received the 2017 Cellular and Molecular Bioengineering Rising Star Award from the Biomedical Engineering Society. She was also appointed as a Chonette Early Career Chair. Assistant Professor **Eun Ji Chung** (Biomedical Engineering) received an Eli and Edythe Broad

Innovation Award for this year's theme, "Endogenous Mechanisms of Tissue Repair." She also received AIChE's 35 under 35 award in the Bioengineering category. Professor **Ellis Meng** (Biomedical Engineering) was appointed an inaugural holder of the Gabilan Distinguished Professorship in Science and Engineering (2016-2019), and she was named ASME fellow. Research Professor **Yolanda Gil** (Computer Science) was named a 2016 ACM Fellow.

In the USC Dornsife College, Assistant Professor **Sami Assaf** (Mathematics) received a 2017 USC Mentoring Award in the *Faculty Mentoring Undergraduates* category. Professor **Jill McNitt-Gray** (Biological Sciences and Biomedical Engineering) received the 2016 Jim Hay Memorial Award for Excellence in Biomechanics Research in Sport from the American Society of Biomechanics. She was also appointed an inaugural holder of the Gabilan Distinguished Professorship in Science and Engineering alongside Professors **Susan Forsburg** (Biological Sciences) and **Anna Krylov** (Chemistry). Professor **Forsburg** also received the *Nature Award for Mentoring in Science*; this is the first time the award was given in the United States. Assistant Professor **Naomi Levine** (Biological Sciences) received a Simons Foundation Early Career Investigator in Marine Microbial Ecology and Evolution Award, and a Citation for Excellence in Refereeing from the American Geophysical Union. Assistant Professor **Carolyn Phillips** (Biological Sciences) was named a 2017 Pew Scholar in Biomedical Sciences, and she received the 2017 March of Dimes Basil O'Connor Starter Scholar Award. Professor **Elena Pierpaoli** (Physics & Astronomy) was awarded best presentation during the Catalina Island Physics Department Retreat and received the Gold Fellowship for the summer. Professors **Judith Hirsch** (Biological Sciences), **Susan Montgomery** (Mathematics), and **Lorraine Turcotte** (Biological Sciences) were appointed holders of the Gabilan Distinguished Professorship in Science and Engineering (2017-2020). Associate Professor (Teaching) **Karla Heidelberg** (Biological Sciences) received the USC Associates Award for Excellence in Teaching. She was also named a 2016-2017 US National Academies Education Fellow in the Life Sciences.



Left to right: Professor Sami Assaf, Vice Provost Elizabeth

WiSE Activities

Programming

During the 2016-2017 academic year, the WiSE Program hosted 60+ events and meetings. In order to further aid in the retention of women faculty and to encourage undergraduate

and graduate students to pursue careers in the academe, WiSE administers a monthly programming series of “WiSE Talks,” which provide an intimate setting to discuss subjects recommended by the community. The talks are held in the WiSE Suite. This year, notable talks included:

- **“Gatekeeper Training: Strategies and Techniques to Recognize and Intervene in Emergency and Non-Emergency Situations”**
Javanne Golob, MSW, Prevention Specialist
USC Student Counseling Services
Thursday, February 16, 2017
- **“Strong enough for a man, but made for a woman”-the role of the estrogen receptor in biomedical research, clinical care and career development**
Andrea Hevener, Professor of Medicine
University of California, Los Angeles
Wednesday, March 8, 2017



Paint night with WiSE faculty members

WiSE continues to provide professional development and networking opportunities for women. In early Fall 2016, WiSE held a community-wide outing to the Catalina Island for a special tour of the USC Wrigley Institute. The following semester, WiSE organized a paint night for WiSE faculty through Wine and Canvas Los Angeles. WiSE also organized and hosted *WiSE on Complex Systems, Models and Materials – A Research Horizons Symposium* to showcase WiSE junior faculty members. The event took place on March 24, 2017 in the University Club

Scriptorium Room and was co-chaired by Professors Amy Childress (Civil & Environmental Engineering) and Sarah Feakins (Earth Sciences).

As part of the 2016-2017 recruitment season and at the request of the host departments, WiSE organized lunch meetings for six faculty candidates with members of the WiSE community, including Leilani Battle (Computer Science) 2/6/2017, Heather Culbertson (Computer Science) 2/7/2017, Rashmi Vinayak (Computer Science) 2/17/2017, Marie Heffern (Chemistry) 2/22/2017, Ellie Pavlick (Computer Science) 2/27/2017, and Bistra Dilkina (Computer Science) 3/1/2017.

During the 2016-2017 WiSE Undergraduate Research Experience, students had the opportunity to participate in 27 sessions, including:

Fall Meet and Greet	8/30/2016
STEM Bytes Seminar with Professors Andrea Armani and Laura Gomez-Consarnau	9/9/2016
Applying for NSF Fellowships	9/14/2016
Writing a Personal Statement	9/22/2016
CV/Resume Workshop	9/27/2016
STEM Bytes Seminar with Professors Suzanne Edmands and Juhi Jang	10/7/2016
Personal Statement Peer Review Workshop	10/12/2016
Lunch with Graduate Students	10/20/2016
Pumpkin Painting	10/25/2016
Lunch with Graduate Students	11/3/2016
Lunch with Faculty	11/9/2016
STEM Bytes Seminar with Professors Phebe Vayanos and Eunji Chung	11/18/2016
End of the Semester Celebration	11/29/2016
Welcome Lunch	1/18/2017
Lunch with Graduate Students	1/24/2017
Dealing with Imposter Syndrome	2/2/2017
Finding and Applying for Fellowships	2/8/2017
STEM Bytes Seminar with Professors Paul Ronney and Julien Emile-Geay	2/17/2017
Lunch with Graduate Students	2/21/2017
DJ Kast – Opportunities through the USC Joint Educational Project	3/2/2017
Lunch with Faculty	3/7/2017
Dealing with Difficult Personalities	3/23/2017
STEM Bytes Seminar with Professors Travis Williams and Pin Wang	3/31/2017
Glenn Fox- Peak Performance Institute	4/4/2017
STEM Bytes Seminar with Professors Felipe de Barros and Kelly Sanders	4/14/2017
Lunch with Graduate Students	4/20/2017
End of Semester Celebration	4/26/2017

The WiSE Faculty Networking Group continues to meet on the last Thursday of each month and enjoyed WiSE-hosted lunches at the beginning of the fall and spring semesters. This year WiSE hosted Dornsife Dean Amber Miller for lunch during the fall semester and Viterbi Dean Yannis Yortsos in the spring.



WiSE Awards Reception

WiSE continues to hold its annual Awards Reception to recognize community achievements (4/28/2017).

New and Revised Awards

WiSE PhD Recruitment Program

During the 2016-2017 academic year, the Women in Science and Engineering (WiSE) Program in collaboration with the Viterbi School of Engineering and the USC Dornsife College of Letters, Arts and Sciences, announced the implementation of a pilot program in support of faculty efforts to recruit PhD students.

The primary goal of the WiSE PhD Recruitment Program is to increase the number of domestic doctoral students by providing travel funds to faculty for prospective Ph.D. student visits. By providing opportunities for students to visit and explore USC at any time during the application process, WiSE hopes to support departments in recruiting excellent PhD students.

WiSE Gabilan Assistant Professorships

After approval from the WiSE Advisory Board, WiSE revised the Gabilan Assistant Professorship nomination requirements to allow for nomination of faculty members after they join USC, typically after completion of a satisfactory third-year review. The redesign will also facilitate consideration for other early career chairs as well.

Upcoming Awards

WiSE is currently working on two new awards to roll out during the 2017-2018 academic year: *End of Dissertation Travel Award* and *Visiting Professorship Program*. Each of these is detailed on page 12.

WiSE Outreach

WiSE continues to issue regular newsletters. WiSE also continues to support the USC Young Researchers Program (YRP) annually. YRP hosts a summer research experience devised and executed by USC graduate students for USC-area high school students in the sciences.

This year, WiSE and the Viterbi School of Engineering hosted a WiSE Preview Day on November 4, 2016. The goal of the event was to increase the number of domestic female applicants to PhD programs in VSoE. The preview day was an open house event for talented female students with backgrounds in the STEM fields interested in pursuing a doctoral degree in engineering. Students met with faculty members and current students and learned more about the research and opportunities available to them at USC. There were 12 attendees from across the country, and at least half of them (through a follow-up survey) said they intended to apply to an engineering PhD program at USC.



Students, volunteers, staff and speakers at the STEW Symposium on February 25, 2017 at USC

In February 2017, WiSE undergraduate researchers Nina Singh and Emily Waggoner participated in the PressFriends program through USC Good Neighbors by presenting short scientific talks to underserved fourth and fifth grade students at the Science, Technology, Engineering and Writing (STEW) Symposium for Kids. Afterward, the students wrote articles about the talks for USC Kids News.

Mentoring

In conjunction with WiSE's stated mission to build a supportive environment for women within the University, WiSE faculty mentor women at all levels – ranging from undergraduate to graduate students and postdoctoral scholars to faculty at all levels. Professor Jessica Parr (Chemistry) continued to coordinate the WiSE Undergraduate Research Experience, mentoring 48 undergraduate researchers and fellows; she will continue in her role during the 2017-2018 academic year.

2017 Hanna Reisler Mentorship Award



Left to right: Professor Anna Krylov,
Professor Jill McNitt-Gray



Left to right: Professor Stacey Finley,
Professor Jill McNitt-Gray

The 2017 Hanna Reisler Mentorship Award, which recognizes individuals at USC who have advanced the careers of women in science and engineering through generous and committed professional mentorship, was awarded to **Anna Krylov**, Professor of Chemistry, to recognize her mentoring to bring about change for female faculty in the national and international landscape, and to **Stacey Finley**, Assistant Professor of Biomedical Engineering, to recognize her exceptional mentoring of graduate students.

Achievements: WiSE Students and Postdoctoral Scholars

Current and past WiSE PhD students and postdoctoral scholars continue to be recognized for their research and accomplishments. **Xiao Liu** (PhD, Biological Sciences, 2017, advisor Naomi Levine) started a postdoctoral position at Princeton/GFDL. **Ezgi Kantarci Oguz** (PhD Candidate, Mathematics, advisor Sami Assaf) was awarded a USC Final Year Fellowships for the 2017-2018 academic year. **Dieu An Nguyen** and **Celja Uebel** (PhD Candidates, Biological Sciences, advisor Carolyn Phillips) were selected for the Chemical Biology Interface T32 Training Grant run by Professor Susan Forsburg. **Courtney Downes** (PhD Candidate, Chemistry, advisor Smaranda Marinescu) received the Bau Prize in recognition of excellence in research and teaching in the tradition of Professor Robert Bao, USC.

In addition, current and recent WiSE undergraduates continue to show promise as emerging researchers and leaders. WiSE Undergraduate Fellow **Ellie Hara** and WiSE Undergraduate Researcher **Renee Wang** received 2017 NSF Graduate Research Fellowships. WiSE Undergraduate Fellow **Erin Mills** received the Emma Josephine Bradley Bovard Award. WiSE Undergraduate Researcher **Amanda Semler** is a Salutatorian of the 2017 graduating class. WiSE Undergraduate Researcher **Samantha McVety** received the 2nd Prize Award from the USC Schwarzenegger Institute for research presented at the USC Undergraduate Symposium for Scholarly and Creative Work. WiSE Undergraduate Researcher **Nina Singh** won the Astronaut Scholarship from the Astronaut Scholarship Foundation. **Stephanie Allen** (class of 2017, advisor Smaranda Marinescu) received a

Provost Fellowship for Fall 2016, and **Anissa Chan** (class of 2017, advisor Smaranda Marinescu) received a SOAR fellowship for Fall 2016.

Development

In April 2017, WiSE submitted a preliminary proposal to the National Science Foundation ADVANCE Program. The proposed *University Led K-12 Schools: a Path to Advancing Women in STEM* focused on the importance of using university-led K-12 schools as a mechanism for removing barriers that hinder advancement of women in STEM faculty careers. While WiSE was not invited to submit a full proposal, the initial pre-proposal provided a much-needed groundwork for future advancements surrounding childcare and K-12 education options near USC.

WiSE Leadership

A critical aspect of the success of WiSE is the direct involvement of men and women faculty members, at all career levels and from both the USC Dornsife 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 Program Staff



Leana Golubchik, Professor of Computer Science and Electrical Engineering in the Viterbi School of Engineering, serves as Director of the WiSE Program. Golubchik was appointed as Director in September 2010.



Mallory Redel serves as the WiSE Program Manager and assists with program development and administration, disbursement of fellowships and grants, and coordination of committees. Mallory joined WiSE in November 2014. Prior to WiSE, Mallory served as the Students Services Advisor at the USC Neuroscience Graduate Program. She holds a Bachelor of Science in Journalism from Middle Tennessee State University and a Master of Science in Social Entrepreneurship from the University of Southern California.



Jessica Parr, Associate Professor of Chemistry (Teaching) in the Dornsife College of Letters, Arts and Sciences serves as the WiSE Undergraduate Research Experience Program Coordinator. She has been leading the undergraduate program since Fall 2013.

WiSE Advisory Board

The WiSE Advisory Board met twice per semester in 2016-2017 (9/15/2016, 12/6/2016, 2/9/2017, and 4/11/2017) and continues to work with program administration to hone its recruitment and support of programs for maximum impact. The first meeting in the spring semester is joint with the USC Dornsife College and Viterbi School Committees.

The Board continues to prioritize mentoring and was pleased to see **Andrea Armani** (Chemical Engineering and Materials Science) successfully promoted to Full Professor this year.

In considering obstacles that impede the progress of women in science and engineering, the Board considered both large and small-scale changes in programming that might have a positive impact. The main emphases this year were in recruitment and career placement of doctoral students, recruitment and retention of faculty, childcare and schooling, academic recognition for WiSE and its faculty, and, as always, mentorship.

WiSE established the PhD Recruitment Travel program, which provides travel funds to faculty for prospective domestic PhD student visits. By providing opportunities for students to visit and explore USC at any time during the application process, WiSE hopes to support departments in recruiting excellent PhD students. The Board also discussed ways in which WiSE can help graduating doctoral candidates explore the best options for their futures. After discussion, the Board recommended formation of an “End of Dissertation Travel Award” for candidates who are nearing degree completion, or who have stayed on for a short time at USC. This award would provide funds to travel to institutions where there may be promising postdoctoral or industry positions, and would be especially beneficial for candidates seeking to change their research area.

The Board suggested that WiSE revise the Gabilan Assistant Professorships to allow nomination of faculty members after they join USC and after a successful third-year review. The Board also recommended forming a mechanism for visiting professorships to raise WiSE visibility and aid in faculty recruitment. The consensus recommendation was to establish a pilot program for weeklong visits. The visiting professor would give a seminar and engage in activities that involve students, with specifics to be proposed by the USC host faculty member. Applications to host a visitor would be reviewed on a rolling basis. WiSE will establish and offer this program during the 2017-2018 academic year.

Each year, the topic of childcare emerges during conversations with members of the Board and wider community. The change in providers of USC's childcare facilities was a hardship. Even as new facilities at UPC will open for the upcoming year, these will not have the capacity to accommodate community needs. Lack of childcare, and infant care in particular, has a negative impact on faculty members' research, and the Board encouraged WiSE to remain vigilant in advocating for these resources.

2016-2017 WiSE Advisory Board Members



Judith Hirsh (Chair)
Professor of Biological Sciences, Neurobiology
USC Dornsife College of Letters, Arts & Sciences



Murali Annavaram
Associate Professor of Electrical Engineering-Systems
USC Viterbi School of Engineering



Linda Duguay
Associate Professor (Research) of Biological Sciences, MEB
USC Dornsife College of Letters, Arts & Sciences



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



Leana Golubchik (Ex-officio, WiSE Director)
Professor of Computer Science and Electrical Engineering
USC Viterbi School of Engineering



Julie Higle
Professor and Chair of Industrial & Systems Engineering
USC Viterbi School of Engineering



Anna Krylov
Professor of Chemistry
USC Dornsife College of Letters, Arts & Sciences



Susan Montgomery
Professor of Mathematics
USC Dornsife College of Letters, Arts & Sciences



Hanna Reisler
Professor of Chemistry
USC Dornsife College of Letters, Arts & Sciences



Remo Rohs
Associate Professor of Biological Sciences, MCB
USC Dornsife College of Letters, Arts & Sciences



Shang-Hua Teng
Professor of Computer Science
USC Viterbi School of Engineering

USC Dornsife WiSE Committee

Committees composed of faculty in each school serve as advisors on grant-making by reviewing and evaluating the applications and making recommendations for funding.

2016-2017 WiSE Dornsife Committee Members



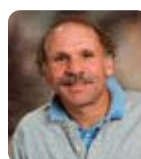
Jill McNitt-Gray (Chair)
Professor of Biological Sciences and Biomedical Engineering
USC Dornsife College of Letters, Arts & Sciences



James Boedicker
Assistant Professor of Physics and Astronomy
USC Dornsife College of Letters, Arts & Sciences



Suzanne Edmands
Professor of Biological Sciences, MEB
USC Dornsife College of Letters, Arts & Sciences



Gary Rosen
Professor of Mathematics
USC Dornsife College of Letters, Arts & Science

A summary of the reviews conducted by the USC Dornsife Committee during the academic year follows:

Program	Deadline	Number of Applicants/ Nominations	Number of Awards
Undergraduate Research, Fall	5/16/16	10	7
Undergraduate Research, Spring	12/1/16	6	6
Graduate Merit	4/8/17	2	2
Graduate Top-Off	3/3/17	11	3 (8 offered)
Undergraduate Research, Summer	4/1/17	4	3

USC Viterbi WiSE Committee

Committees composed of faculty in each school serve as advisors on grant-making by reviewing and evaluating the applications and making recommendations for funding.

2016-2017 WiSE Viterbi Committee Members



Malancha Gupta (Chair)
Associate Professor of Chemical Engineering & Materials Science
USC Viterbi School of Engineering



Felipe de Barros
Assistant Professor of Civil & Environmental Engineering
USC Viterbi School of Engineering



Yan Liu
Associate Professor of Computer Science
USC Viterbi School of Engineering



Megan McCain
Assistant Professor of Biomedical Engineering
USC Viterbi School of Engineering

A summary of the reviews conducted by the USC Viterbi Committee during the academic year follows:

Program	Deadline	Number of Applicants/ Nominations	Number of Awards
Undergraduate Research, Fall	5/16/16	14	11
Undergraduate Research, Spring	12/1/16	12	12
Graduate Merit	4/8/17	7	2
Graduate Top-Off	3/3/17	8	3 (7 offered)
Undergraduate Research, Summer	4/1/17	5	4

New Faculty



Bistra Dilkina will be joining the USC Department of Computer Science as a Gablian Assistant Professor in Spring 2018. She received her PhD in Computer Science from Cornell University in January 2012 under the supervision of Carla Gomes. Afterward, she was a Postdoctoral Associate at the Institute for Computational Sustainability at Cornell. She is currently an Assistant Professor at Georgia Tech's School of Computational Science and Engineering.



Heather Culbertson will be joining the USC Department of Computer Science as a Gablian Assistant Professor in Spring 2018. She is currently a postdoctoral fellow in the Department of Mechanical Engineering at Stanford University where she works in the Collaborative Haptics and Robotics in Medicine (CHARM) Lab. She received her PhD in the Department of Mechanical Engineering and Applied Mechanics (MEAM) at the University of Pennsylvania in 2015 working in the Haptics Group, part of the General Robotics, Automation, Sensing and Perception (GRASP) Laboratory. She completed a Masters in MEAM at the University of Pennsylvania in 2013, and earned a BS degree in mechanical engineering at the University of Nevada, Reno in 2010. She is currently serving as the local arrangements co-chair of the IEEE Haptics Symposium.



Rosa di Felice will begin her Associate Professor appointment in the USC Department of Physics and Astronomy this academic year. She received her PhD from the University of Rome "Tor Vergata" in 1996. Following postdoctoral appointments at Xerox Palo Alto Research Center and the University of Modena and Reggio Emilia, she was a research staff member at the Istituto Nanoscienze of the National Research Council in Italy, where she was tenured in 2006. Rosa is a renowned expert in theoretical biophysics and condensed matter physics, using state-of-the-art numerical techniques to study the structure and electronic properties of DNA and proteins, charge transfer in biological systems, biomolecular nanostructures, protein-DNA binding, and hybrid bio-nano-systems. She has published more than 100 papers in peer-reviewed journals.

WiSE Financial Awards

The WiSE Program has adhered closely to the original structure of funds allocation outlined by the 2000 WiSE Task Force: \$500k for Recruitment/Retention; \$100k for Undergraduate Research; \$250k for PhD Student and Postdoctoral Support; and the remaining funds to support new additional programs. Actual distribution of funds may vary slightly each year depending on the return of investment income on the WiSE endowment and on the number of candidates who accept WiSE awards.

WiSE Jr. Gabilan Chairs

During the 2016-2017 recruitment season WiSE awarded WiSE Gabilan Jr. Chairs to two new faculty hires.

Bistra Dilkina	Computer Science	Viterbi
Heather Culbertson	Computer Science	Viterbi

Formal Program Awards

Program	# Awards
Faculty Recruitment / Faculty Retention	22
Major Support for Current Faculty	0
WiSE Gabilan Jr. Chair	2
WiSE Gabilan Distinguished Professorship	4
Lloyd Armstrong, Jr. Chair	1
Support for Facilitating Diversity in Faculty Searches	6
Faculty Bridge Funding	0
Supplemental Faculty Support	37
Merit Award for Excellence in Postdoctoral Research	1
Graduate Top-Off Awards	6
Merit Fellowships for Current PhD.	5
Travel Grants	79
Undergraduate Research Grants	48
Child Care Subsidies	7
Support for Faculty Pregnancy, Childbirth , and Adoption	0
Support for PhD. and Postdoc Pregnancy, Childbirth, and Adoption	0
WiSE Leadership Award for Students and Postdoctoral Scholars	2

Discretionary Awards

In addition to its formal suite of programs, costs were incurred in support of program activities (such as receptions, supporting a cohort of new assistant professors, 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 2016-2017, these awards included:

Group	Purpose
USC Department of Computer Science	To support travel of USC undergraduate and PhD. students to the Grace Hopper Celebration of Women in Computing.
Women in Chemistry	To support the annual activities for women postdocs and PhD students in the Department of Chemistry.
Young Researchers Program	To support a summer research experience devised and executed by USC graduate students for USC-area high school students in the sciences.
Charlotte's Web (Women in Math)	To support the annual activities of the networking and professional development group among women students in the Department of Mathematics.

APPENDIX 1:

Current WiSE Faculty, Tenured and Tenure-Track (Including New Hires)

USC Dornsife College

Life Sciences

Sarah Bottjer	Professor	Biological Sciences (Neuro)
Suzanne Edmands	Professor	Biological Sciences (MEB)
Susan Forsburg	Professor	Biological Sciences (MCB)
Judith Hirsch	Professor	Biological Sciences (Neuro)
Emily Liman	Professor	Biological Sciences (Neuro)
Jill McNitt-Gray	Professor	Biological Sciences (HEB)
Lorraine Turcotte	Professor	Biological Sciences (HEB)
"Jasmine" Xianghong Zhou	Professor	Biological Sciences (MCB)
Liang Chen	Associate Professor	Biological Sciences (MCB)
Wiebke Ziebis	Associate Professor	Biological Sciences (MEB)
Irene Chiolo	Assistant Professor	Biological Sciences (MCB)
Carly Kenkel	Assistant Professor	Biological Sciences (MEB)
Naomi Levine	Assistant Professor	Biological Sciences (MEB)
Carolyn Phillips	Assistant Professor	Biological Sciences (MCB)
Lindsey Schier	Assistant Professor	Biological Sciences (HEB)

Physical Sciences / Mathematics

Susan Friedlander	Professor	Mathematics
Anna Krylov	Professor	Chemistry
Jia Grace Lu	Professor	Physics & Astronomy
Susan Montgomery	Professor	Mathematics
Elena Pierpaoli	Professor	Physics & Astronomy
Hanna Reisler	Professor	Chemistry
Rosa di Felice	Associate Professor	Physics & Astronomy
Sarah Feakins	Associate Professor	Earth Sciences
Juhi Jang	Associate Professor	Mathematics
Meghan Miller	Associate Professor	Earth Sciences
Sami Assaf	Assistant Professor	Mathematics
Smaranda Marinescu	Assistant Professor	Chemistry

The USC Viterbi School of Engineering

Andrea Armani	Professor	Chemical Engineering and Materials Science
Amy Childress	Professor	Civil and Environmental Engineering
Leana Golubchik	Professor	Computer Science
Julie Higle	Professor	Industrial and Systems Engineering
Andrea Hodge	Professor	Chemical Engineering and Materials Science
Maja Matarić	Professor	Computer Science
Ellis Meng	Professor	Biomedical Engineering
Urbashi Mitra	Professor	Electrical Engineering
Mahta Moghaddam	Professor	Electrical Engineering
Alice Parker	Professor	Electrical Engineering
Burcin Becerik-Gerber	Associate Professor	Civil and Environmental Engineering
Malancha Gupta	Associate Professor	Chemical Engineering & Materials Science
Eva Kanso	Associate Professor	Aerospace and Mechanical Engineering
Yan Liu	Associate Professor	Computer Science
Michelle Povinelli	Associate Professor	Electrical Engineering
Katherine Shing	Associate Professor	Chemical Engineering & Materials Science
Nora Ayanian	Assistant Professor	Computer Science
Heather Culbertson	Assistant Professor	Computer Science
Bistra Dilkina	Assistant Professor	Computer Science
Eun Ji Chung	Assistant Professor	Biomedical Engineering
Dina El-Damak	Assistant Professor	Electrical Engineering
Stacey Finley	Assistant Professor	Biomedical Engineering
Aleksandra Korolova	Assistant Professor	Computer Science
Megan McCain	Assistant Professor	Biomedical Engineering
Kelly Sanders	Assistant Professor	Civil and Environmental Engineering
Maryam Shanechi	Assistant Professor	Electrical Engineering
Shaama Sharada	Assistant Professor	Chemical Engineering & Materials Science
Sze-Chuan Suen	Assistant Professor	Industrial and Systems Engineering
Alejandra Uranga	Assistant Professor	Aerospace and Mechanical Engineering
Phebe Vayanos	Assistant Professor	Industrial and Systems Engineering
Cristina Zavaleta	Assistant Professor	Biomedical Engineering

APPENDIX 2:

Faculty Candidates Interviewed On Campus

As in previous years, WiSE leadership offered to meet with women faculty candidates during their visits to campus, 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 continued to take advantage of this offer and senior WiSE faculty met with 21 faculty candidates over the course of 2016-2017. The list of candidates is below:

Puja Goyal	Chemistry	12/12/2016
Keri Backus	Chemistry	1/10/2017
Marie Heffern	Chemistry	1/12/2017
Noemie Elgrishi	Chemistry	1/26/2017
Nadia Polikarpova	Computer Science	1/30/2017
Leilani Battle	Computer Science	2/6/2017
Hatice Osmanbeyoglu	Biological Sciences-MCB	2/7/2017
Heather Culbertson	Computer Science	2/7/2017
Sharon Goldberg	Computer Science	2/7/2017
Dorsa Singh	Computer Science	2/9/2017
Rashmi K. Vinayak	Computer Science	2/16/2017
Elli Pavlick	Computer Science	2/27/2017
Sarah Rauscher	Biological Sciences- MCB	2/27/2017
Elizabeth Cochran	Earth Sciences	2/28/2017
Bistra Dilkina	Computer Science	3/1/2017
Eva-Marie Strauch	Biological Sciences- MCB	3/2/2017
Jessica Hawthorne	Earth Sciences	3/7/2017
Lingling Ye	Earth Sciences	3/27/2017
Jelena Marasevic Diakonikolas	Electrical Engineering/Computer Science	4/4/2017
Heidi Houston	Earth Sciences	4/13/2017
Athina Markopoulou	Electrical Engineering	4/27/2017

APPENDIX 3:

Samples of WiSE Events Flyers

The USC Women in Science and Engineering Program



Presents

Andrea Hevener, PhD

Professor of Medicine, UCLA

"Strong enough for a man, but made for a woman" – the role of the estrogen receptor in biomedical research, clinical care and career development.

Wednesday, March 8, 2017

Talk: 2:00pm

Ray Irani Hall (RRI), Room 101

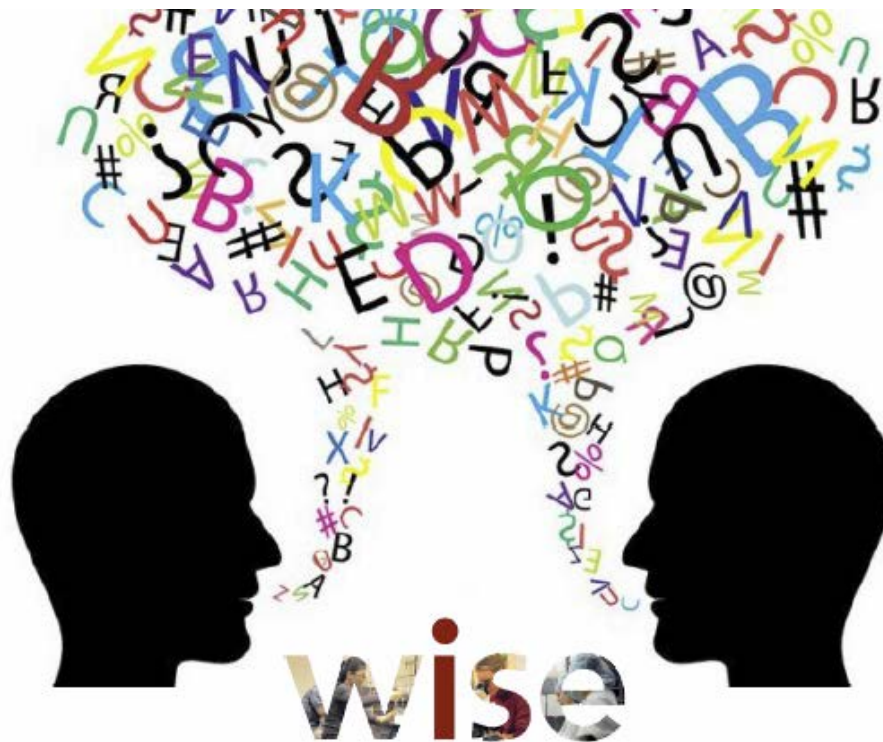


The increased life expectancy trends for women in the modern era suggest that we will be challenged with combating postmenopausal disease risk for over three decades of life. The lack of effective treatment strategies to contest the rising incidence of metabolic dysfunction and obesity during the menopausal transition is limiting our ability to restrain chronic diseases including type 2 diabetes, heart disease and certain forms of cancer in women. Improved interrogation of estrogens and their biological actions mediated by estrogen receptors (ERs) in the regulation of cardiometabolic health will enhance novel target discovery and promote the development of therapeutic strategies to curb metabolic related diseases. We and others have clearly shown a protective role of ER α in maintenance of metabolic

homeostasis and insulin sensitivity in humans and rodents. For over a decade now, my laboratory has been engaged in a tissue-specific as well as cell autonomous interrogation of ER α to understand its mechanisms of action on metabolism and insulin action. Our recent studies show a strong role of ER α in the control of metabolic homeostasis by regulating mitochondrial remodeling and function. We show these ER α -induced regulatory mechanisms underlie the maintenance of glucose tolerance and insulin sensitivity, and are essential for the metabolic-related health benefit of chronic exercise training.

Thus, from a clinical perspective, refinement of our understanding regarding the biological actions of ERs will lay the framework for the design of better targeted therapies to improve the health of women while reducing undesired complications that have previously limited the efficacy and use of traditional hormone replacement interventions. In addition to presenting research findings from my laboratory I will discuss strategies to enhance research funding and scientific impact, as well as the important roles women play in biomedical research and academic medicine

Contact WiSE at (213) 740-0996 or wiseprog@usc.edu for further details



Talks Presents:

Gatekeeper Training: Learning Strategies and Techniques to Recognize and Intervene Directly or Indirectly in Both Emergency and Non-Emergency Situations

With Prevention Specialist of the USC Student Counseling Services, *Javanne Golob, MSW*

Thursday, February 16th

12:30 pm

WiSE Suite (DRB 232)

Lunch will be provided.

*****RSVP here by Friday, February 10th.*****



APPENDIX 4:

Example of WiSE Newsletters

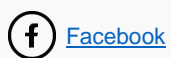


May 22, 2017

**USC Women in Science
and Engineering**

1042 Downey Way, DRB 232
Los Angeles, CA 90089-1111
(213) 740 - 0996

Stay up to Date:



Upcoming Events

Faculty Networking Lunch

Thursday, May 25, 2017

12:00pm

DRB 232

****Faculty only****

Please bring your lunch.

WiSE Undergraduate Researchers Lunch

Monday, June 5, 2017

12:00pm

DRB 232

WiSE Undergraduate Researchers Lunch

Monday, June 12, 2017

12:00pm

DRB 232

WiSE Undergraduate Researchers Lunch

Monday, June 19, 2017

12:00pm

DRB 232

WiSE Undergraduate Researchers Lunch

Monday, June 26, 2017

12:00pm

DRB 232

Upcoming Deadlines

WiSE Child Care Award (Summer Semester)

Application Deadline: June 1, 2017

Award Amount: \$1,400.00 per semester.

WiSE Child Care Grants provide doctoral students, postdoctoral fellows, and faculty members in WiSE-eligible departments with grants to subsidize tuition for children enrolled at state certified daycare programs of their choice. WiSE Child Care Grants are awarded on a semester by semester basis and are available for a select number of applicants in good standing who have primary childcare responsibilities for a child in the infant through pre-school age range. Applicants may apply to renew their grant at the end of each semester, but priority will be given to new candidates. All applicants must show proof of dependency, proof of enrollment, and a copy of the facility's state licensing permit as part of their application. Please note that WiSE Child Care Grants cannot be used to support the salary of a nanny or other care giver. WiSE Child Care Grants are paid in the form of a single lump sum grant, typically awarded during the second month of the semester.

For more information see: <http://wise.usc.edu/our-programs/grants-and-awards/faculty/child-care-subsidy/>

Faculty In the News

Congratulations to **Kelly Sanders** (Civil and Environmental Engineering) on her appointment as a Dr. Teh Fu Yen Early Career Chair.

Congratulations to **Nora Ayanian** (Computer Science) on her appointment as an Andrew and Erna Viterbi Early Career Chair.

Congratulations to **Megan McCain** (Biomedical Engineering) on her appointment as a Chonette Early Career Chair.

Congratulations to **Stacey Finley** (Biomedical Engineering) on her appointment as a Gordon S. Marshall Early Career Chair.

Congratulations to **Andrea Armani** (Chemical Engineering and Materials Science) on her promotion to Full Professor.

Congratulations to **Judith Hirsch** (Biological Sciences), **Susan Montgomery** (Mathematics), and **Lorraine Turcotte** (Biological Sciences) on being appointed holders of the Gabilan Distinguished Professorship in Science and Engineering.

Articles of Interest

[Why Mothering Makes Us Better at Work](#)

[What If Millie Dresselhaus, Female Scientist, Was Treated Like A Celebrity - GE](#)

[A new performance review process could fight cultural bias against women at work](#)



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