Caucus for Women in Statistics (CWS)
Promoting and Supporting Women in Statistics & Data Science

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The Institute of Statistical Mathematics
June 23, 2023
Outline

- Why DEI?
- My Journey
- Caucus for Women in Statistics
- Diversity, Equity and Inclusion Efforts at St. Jude
- Present and Future
Why DEI?

- **diversity**
  - of people, perspectives

- **equity**
  - in policy, practice, position + outcomes

- **inclusion**
  - via power, voice + organizational culture
What is Your Vantage Point?

_Fierce Conversations_ by
Susan Scott

“Beach Ball Reality”
My Journey

- **Career Paths**
  - Washington (3), Utah (4), Oregon (5), and Tennessee (6)
  - Fred Hutchinson Cancer Research Center, University of Washington
  - Huntsman Cancer Institute, University of Utah
  - Knight Cancer Institute, Oregon Health & Science University
  - St. Jude Children’s Research Hospital

- **Educational Paths**
  - Japan to US
  - California, Montana, Iowa (1, 2)
  - University of Montana: BA in Psychology
  - University of Iowa: MS in Statistics, PhD in Biostatistics
  - Oregon Health & Science University: MBA in Healthcare Management
Caucus for Women in Statistics (CWS)

https://cwstat.org/

- The CWS is an international professional statistical society formed in 1971 with its missions to advance careers of women statisticians through advocacy, educational resources and networking opportunities.
- The CWS is independent of the American Statistical Association (ASA). It collaborates closely with ASA on initiatives to advance and advocate women in statistics but also widely with other international statistical organizations.
- It is a relatively small organization with 300+ members around the world (mostly in the US and Canada).
- Donna Brogan is our founding president. CWS celebrated the 50th anniversary in 2021.
“At the ASA annual meeting in August of 1969 in New York City about ten women held three informal meetings to discuss the need and mission for a Women’s Caucus for statisticians. Discussion continued at the next annual meeting, held jointly with the American Economic Association in December of 1970 in Detroit, and was attended by about 40 to 50 persons from both professional groups. The impetus for these discussions primarily came from two sources: the second wave of feminism sweeping the country and discrimination against women that impacted female statisticians. Areas of discrimination included education, employment, salary, and career advancement and recognition. In 1971 the Caucus for Women in Statistics was officially organized, recognized by the ASA, and permitted to organize a paper session for annual meetings.”

Donna Brogan served as the first Caucus president, from 1970-1973.
CWS Today

- Executive Committee: Executive Director, President, President-Elect, Past President, Treasurer, Secretary
- Committees (9): Program, Communications, Professional Development, Liaisons to Other Organizations, Country Reps, Promoting Positive Professional Environments (P3E), Travel Award, Societal Impact Award, Nomination
- Activities: monthly happy hours, educational webinars, awards (Societal Impact Award, Travel Awards), mentoring program, Talk the Walk interview series, ASA Women in Statistics & Data Science conference, ASA Committee on Women in Statistics (CoWiS)
- Organizes sessions to feature women data scientists and leaders at various professional conferences
- Virtual Around the World Symposium 2021

JSM 2022 CWS Reception with Jana Asher, Winner of the Societal Impact Award

JSM 2022 Session

Virtual Happy Hours with Madam President
IDWSDS 2021

• International Day of Women in Statistics & Data Science (IDWSDS), October 11, 2021 (UTC: 12:00am-11:59pm)
• 24 hour, virtual, around the world conference featuring women statisticians and data scientists.
• Endorsement from 36 statistical and data science organizations around the world
• 205 participants from 36 countries
• 55% academic, 17% students, 10% non-profit organizations, 9% business and industry, 9% government.
IDWSDS Celebrates Women Statisticians Around the World

Session 3 (3:00pm-5:00pm)

Gender, Statistics and COVID-19 in Korea

Organizer: Man-Suk Oh

Introduction to WISK

Koren Eun-Chi

https://research.gu.or.kr/en/main.php

Professor, Department of Statistics
Ewha Women’s University, Korea

President, Women in Statistics in Korea (WISK)

Integrating a gender gap perspective into statistics

Sue-Hye Park

Seoul National University and Korea Forum IAS

Professor, Department of Biostatistics
Graduate School of Public Health
Yonsei University, Korea

Integrating gender gap into clinical trials and national statistics

Juyeon Lee

https://research.gu.or.kr/en/main.php

Dean, College of Pharmacy
Ewha Women’s University, Korea

Progression of COVID-19 patients by the underlying disease and drug treatment in Korea

Jinheon Lee

https://www.researchgate.net/profile/Byeze-Da-Lee

Research Professor, Department of Data Science & Statistics
Korea National Open University, Korea

SBS Executive Board Director

Algorithms for clustering COVID-19 data: An overview of current trends and new visual approaches

Eun-Kyoung Lee

https://research.gu.or.kr/en/main.php

Professor, Department of Statistics
Ewha Women’s University, Korea

New Zealand


Korea

European

Session 10 (3:00pm-5:00pm)

Bayesian Statistics

Organizers: Xenia Micoiu-Odou, Alejandro Pacheco QISBA

In this session we have the pleasure to host three early career women researchers from the junior ISBA community. They will present recent advances in the broader area of Bayesian statistics.

Xenia Micoiu-Odou, Ph.D. in Statistics from University of California, Santa Barbara, obtained her Ph.D. in June 2019. Her research interests include the analysis of spatial and network data. In collaborative tasks and instructional systems she enjoys working on projects related to statistics and data science education. She currently teaches in the B.S. package for social data science teachers with grading and providing feedback to their students.

https://www.stat.ucsb.edu/

Marta Chollet, M.Sc. (University of Granada) is a postdoc at the University of Granada and is a PhD candidate at the University of Granada. Her research interests are in the field of spatio-temporal data analysis. She is working on developing and applying Bayesian models to analyze data from environmental and health studies. Her current research focuses on the development of new methodologies for environmental monitoring and prediction, with applications to meteorology and climate change. She received her Ph.D. in Statistics from the University of Granada in 2018. Her current work involves the development of novel statistical methods for the analysis of spatio-temporal data.

https://www.unizar.es/en/la-universidad/departamentos/ciencias-de-la-educacion/profesorado/m/d/marta-chollet

Marta Chollet

University of Granada

https://www.unizar.es/en/la-universidad/departamentos/ciencias-de-la-educacion/profesorado/m/d/marta-chollet

US and Canada


Online

Session 16 (8:00pm-9:00pm)

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Marta Chollet

University of Granada

https://www.unizar.es/en/la-universidad/departamentos/ciencias-de-la-educacion/profesorado/m/d/marta-chollet
Women Supporting Women

Video compilation of past president interviews
https://www.youtube.com/watch?v=MLXtWNmS9s&t=21s

Donna Brogan celebrating CWS 50th Birthday at CWS Reception, JSM 2022.
Diversity, Inclusion and Equity Efforts at St. Jude
Tennessee

Capital: Nashville
Nickname: The Volunteer State
Population in 2020: 6.9 million (15th most populous state)
Area: 109,247 km² (36th largest state)

Great Smoky Mountains National Park
Country Music Hall of Fame and Museum
Grand Ole Opry
Memphis, Tennessee

Population (2020): 633,104
White: 27.1%
Black: 64.7%
Hispanic: 7.7%
Asian: 1.7%

National Civil Rights Museum

Graceland
St. Jude Children’s Research Hospital

SJCRH was founded by Danny Thomas in 1962. He made a promise to St. Jude Thaddeus, the patron saint of hopeless causes.

“Show me my way in life, and I will build you a shrine.”
Our mission statement

The mission of St. Jude Children’s Research Hospital is to advance cures, and means of prevention, for pediatric catastrophic diseases through research and treatment. Consistent with the vision of our founder Danny Thomas, no child is denied treatment based on race, religion or a family's ability to pay.
St. Jude Children’s Research Hospital

• Non-profit research hospital dedicated to care and research for children with catastrophic diseases
  80% cancer and 20% other difficult to treat diseases including sickle cell anemia
  90% of patients treated under clinical protocol
• ALSAC raises money for St. Jude
  Patients and families do not pay for medical expenses
• Approximately 6,000 employees
• 22 academic departments
  12 clinical, 7 basic science and 3 data science departments
• All positions comparable to tenured or tenure-track
Biostatistics Department

- A relatively large department consisting of 70 employees
  - 15 faculty, 30 staff, 8 computing personnel
- Typical faculty efforts distribution: 70% collaborative research and 30% independent research
- A team of faculty and staff is assigned to specific disease areas or departments to provide biostatistics collaboration and consulting
- 80% of all collaborative projects are clinical research
- Department is diverse and multi-cultural.
Diversity, Equity and Inclusion Office

FY22-27 Goals
1. Infrastructure and Analytics
2. Leadership
3. Talent
4. Culture
5. Patients and Research Participants
6. Community
7. Reputation
Women in Leadership + Learning (WILL)

WILL Vision Statement
To ensure that St. Jude is a supportive, equitable workplace free of barriers for women to work, advance and lead.

WILL Program Goals
• Empower women with the tools and resources to thrive in their leadership and career journeys
• Develop champions to support, mentor, sponsor and empower women leaders of today and tomorrow
• Explore how St. Jude's culture and policies can contribute to a safe, equitable and inclusive place for women, honoring intersectionality
Program Description

- 30 women faculty of all ranks (instructor, assistant, associate and full) are selected after open application period.

- 10 champions who hold a senior leadership position (EVP, SVP, department chairs) are invited to participate and serve as a champion to a group of three women.

- A champion is assigned to each group to provide mentoring, coaching and sponsorship.

- Both women participants and champions learn together.
Simons University Institute of Inclusive Leadership

INSTITUTE STAFF

Susan MacKenty Brady

Deloitte Ellen Gabriel Chair for Women & Leadership
CEO, Simmons University Institute for Inclusive Leadership

Simmons University Institute for Inclusive Leadership
S. Brady | Simmons University Institute for Inclusive Leadership
Topics Covered in the Program

The 7 Practices

1. Investing in Your Best Self
2. Embracing Authenticity
3. Cultivating Courage
4. Fostering Resilience
5. Inspiring a Bold Vision
6. Creating a Healthy Team Environment
7. Committing to the Work of an Inclusive Leader
WILL Curriculum

Our Learning Journey

March 2023
- Kick-Off Orientation
  - Intensive I
    - Building the Foundation
    - Activating Best Self
    - Cultivating Resilience
    - Returning to your Best Self
  - Champion Lunch

March 2023
- Application Session

April 2023
- Office Hours

May 2023
- Intensive II
  - DEI as Leadership Competence
  - Gender & Leadership
  - Intentional Networking
  - Negotiating for Success
  - Champion Dinner

May 2023
- Application Session

June 2023
- Capstone
  - Office Hours
  - Champion Meeting

WILL Program Women in Leadership + Learning
Returning to Best Self with Susan Brady

How harshness robs your Best Self

HARSH ABOUT SELF  YOUR BEST SELF  HARSH ABOUT OTHERS
Leading in a Gendered World with Elisa van Dam

As women, we need to do our jobs and manage perceptions

INSTITUTE STAFF

Elisa van Dam
Vice President, Allyship & Inclusion
DEI as Leadership Competencies with Darlene Slaughter

The Work of the Inclusive Leader™

The 6 Actions

LEVEL 1

BECOMING AWARE

1. UNDERSTAND BIAS
   Increase awareness of biases, both conscious and unconscious.
   LEARNING & SELF-REFLECTION

LEVEL 2

BECOMING AN ALLY AND UPSTANDER

2. VALUE EQUITY
   Recognize the problems of historic systems of privilege and oppression and appreciate the benefits of dismantling them.
   LEARNING & SELF-REFLECTION

3. PARTNER FOR SUCCESS
   Actively support and advocate for women and other underrepresented groups.
   LEARNING & SELF-REFLECTION

4. ADVOCATE FOR BELONGING
   Create an environment where everyone feels uniquely seen, heard and valued.
   LEARNING & SELF-REFLECTION

LEVEL 3

BECOMING A CHANGE AGENT

5. SPONSOR
   Leverage relationship capital for the advancement of others.
   LEARNING & SELF-REFLECTION

6. MAKE CHANGE
   Initiate and champion systems and cultures that are inclusive and equitable.
   LEARNING & SELF-REFLECTION

INSTITUTE FELLOW

Darlene R. Slaughter
VP, Chief Diversity, Equity, and Inclusion Officer at the Washington Metropolitan Area Transit Authority (WMATA)
Exercise

7 Questions to Courageous Action™

1. Is this important? Why?
   YES

2. Is this the right time? Why?
   YES

3. What is the best thing that could happen? And then what?

4. What is the worst thing that could happen? And then what?

5. What don’t I know?

6. Who can help? How?

7. How can I take a small step?
Current Status

• Two cohorts completed the program, Fall 2022 and Spring 2023. Approximately 60 women faculty participated, representing 40% of all women faculty at St. Jude.

• The evaluation was overwhelmingly positive with many appreciating the opportunity to network with women faculty in other departments.

• The program received the support from the executive leadership and will continue next year.

• There has been discussion to expand the program to include non-faculty (professional staff) as well as to create a more general leadership program for both men and women.
Where Are We Now and Where Can We Go?
“Women hold the least senior administrative positions and are the lowest paid among higher ed administrators. The picture is starker for women of color: in 2016, only 14 percent of higher ed administrators – men and women were racial or ethnic minorities.”
Executive Summary

Representation of Women in Academic Medicine 2018-2019

- Medical School Applicants: 51%
- Medical School Graduates: 48%
- Residents: 46%
- Faculty: 41%
- Division Chiefs: 29%
- Full Professors: 25%
- Senior Associate Deans: 34%
- Deans: 18% (18%)

Progress of Women in Statistics

• A dramatic increase in bachelor’s and master’s degrees awarded during the last 20 years.

• A steady increase in PhD degree awarded.

• Women representation in PhDs improved from 25% in 1987 to 40% in 2020.

https://magazine.amstat.org/blog/2021/10/01/undergrad-stats-degrees-up/
Still More to Do

• Gender disparity is even more prominent in other data science fields, less than 20% PhDs awarded to women in computer sciences and physics and mechanical engineering.

• ASA also released 2020 Work and Salary Survey conducted by Langer Research Associates. The report states:
  
  • “Women tend to make less, both in base salary and total employment income, with gaps growing wider through mid-career.”

  • “More men than women were full professors, 43 vs. 25 percent, though rates at the associate and assistant levels were more comparable.”

  • “Forty-five percent of men were fully tenured, compared with 32 percent.”

Opportunities

• Create a network of women statisticians and data scientists
• Nurture the network
• Share stories, challenges and support each other
• Reach out to other international groups CWS, ASA JEDI Outreach Group, ASA Committee on Women In Statistics (CoWiS)
• Engage in sponsorship and advocacy
• Together we can break the glass ceiling!

“The term *glass ceiling* refers to the sometimes invisible barrier to success that many women come up against in their careers.” It was first coined by Marilyn Loden almost 40 years ago. [https://www.bbc.com/news/world-42026266](https://www.bbc.com/news/world-42026266)
Special Thank-You to Professors
Tomoko Matsui,
Mihoko Minami,
Kozo Kitamura,
ISM Director Tsubaki and Deputy Director Kawasaki
Thank You for Your Attention.