



TeamUp5G Workshop on Ethics and
Inclusiveness for Telecommunications
Engineers



Documentary “Picture a Scientist” and discussion

Ana García Armada and Raquel Pérez Leal, March 4th

“PICTURE A SCIENTIST chronicles the groundswell of researchers who are writing a new chapter for women scientists. Biologist Nancy Hopkins, chemist Raychelle Burks, and geologist Jane Willenbring lead viewers on a journey deep into their own experiences in the sciences, ranging from brutal harassment to years of subtle slights. Along the way, from cramped laboratories to spectacular field stations, we encounter scientific luminaries - including social scientists, neuroscientists, and psychologists - who provide new perspectives on how to make science itself more diverse, equitable, and open to all.”

“Quietly devastating.” - The Boston Globe

► **a film by Sharon Shattuck & Ian Cheney**

“Essential viewing for anyone tired of bias.” - WGBH

“Sweeping in scope yet intimately compelling.” - Science



Objectives

- ▶ What do women contribute to science? (And to STEM?)
- ▶ Get to know and share our views of the current reality. Be aware
- ▶ Reflect on our scientific and social environment
 - What is my role?

Some Data

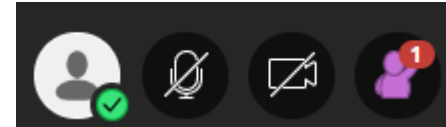
- ▶ Diverse and inclusive teams make more impactful decisions
87% of the time, take less time to make decisions, and deliver 60% better results (Forbes)
- ▶ Organizations with more than 30% female leaders have 6% higher net margins (Peterson Institute for International Economics)
- ▶ Boards of directors with more women have a 36% higher return on equity (Credit Suisse)

An illustration featuring four stylized human figures interacting with four large, interlocking puzzle pieces. The puzzle pieces are colored light green, grey, orange, and yellow. One woman sits on the green piece, a man sits on the grey piece using a laptop, a woman stands by the orange piece, and a man stands by the yellow piece. The background is light blue with green foliage. The text "It's not a women's issue, it's everyone's!" is centered over the puzzle pieces.

It's not a women's issue, it's everyone's!

Organization

- ▶ To watch together the documentary that is structured in six parts
- ▶ Every two parts we will have a 15 min open discussion
 - Some questions will be proposed
 - Two ways to participate:
 - ▶ Speaking: Raise your hand to speak, the moderators will give you the floor
 - ▶ Writing in the chat



I. The tip of the iceberg & II. The underneath

- ▶ What is your picture of a scientist?
- ▶ How would you feel if you came to a club where you are the only different person? Would you become a member of the club?
- ▶ Is it important to have role models?
- ▶ What can you/we do? (victim, witness)



➡ **In Technical & Engineering areas like Telecomm, the proportion of women is even lower than in the areas presented in the film**



unwanted sexual attention
coercion
assault

subtle exclusions
being left off an email
not being invited to collaborate
vulgar name-calling
obscene gestures
hostility
passed over for promotions
relentless pressure for dates
remarks about bodies
sabotaging of equipment

III. Data Driven & IV. The Nature of the beast

- ▶ When we are different, do you think we need to try to fit?
- ▶ What do you think about the case of Jennifer and John?
- ▶ Do you think the data is useful? (never seen it ..)
- ▶ The importance of getting together, but you do not want to be seen as weaker

<u>Total Lab Space</u>	
<u>Men</u>	<u>Women</u>
2,936 sq. ft. (avg.)	1,974 sq. ft. (avg.)

1900 0.63%

1930 9.33%

1960 4.75%

1990 23%

2017 29%

Figure 18: U.S. Women in STEM

Women in Science & Engineering, 2018

Bachelor's degrees awarded 50%

Master's degrees awarded 44%

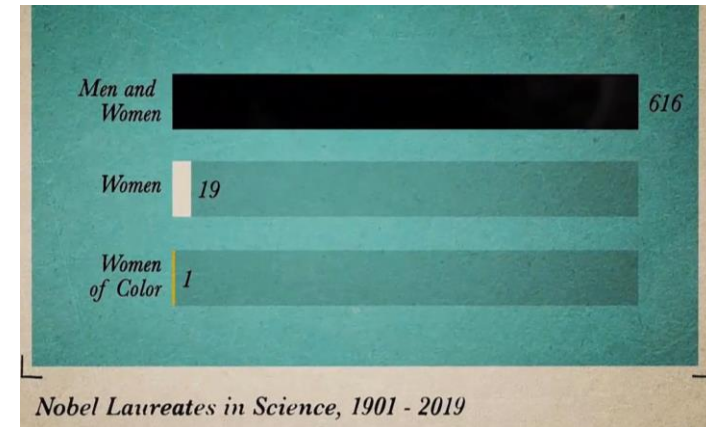
Ph.D.s awarded 41%

Post Docs 36%

Employed 29%

V. The eyes to See & VI. The Scouts before the Troops

- ▶ You didn't show it, I didn't know .. To show or not to show? (scene -> kicked out)
- ▶ What do we lose if this problem is not solved?
 - The astronaut - not all cases have a happy ending
- ▶ Are allies and mentors needed?



If time allows ..

- ▶ What is your favorite part of the documentary?
- ▶ What is your favorite character?
- ▶ What do you think of so much time and energy spent?
- ▶ What to tell to the young girls. They don't want to be super-heroes
- ▶ What did you feel when ..
 - Dr. Marchant was sent out only for 3 years and then he was allowed back?
 - They changed the name of the Glacier?





New RAN TEchniques for 5G UltrA-dense Mobile networks - TeamUp5G

Grant Agreement Number: 813391

Project Acronym: TeamUp5G

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Thematic Area: Innovative Training Networks (ITN)

Project start date: 01/01/2019

<http://teamup5g.webs.tsc.uc3m.es/>