



TeamUp5G Workshop on Ethics and  
Inclusiveness for Telecommunications  
Engineers



## Group discussion about how to increase women presence in science and engineering

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# Context

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- ▶ **Women in engineering are a minority**
  - Studies in colleges and universities
  - In industry
  - In research
- ▶ **We wonder whether this has to be this way. Why?**
  - The technical field loses part of its capacity and potential if women do not participate in
  - Many professions of the future will be mainly technological and scientific
    - ▶ If women do not join, the gap will increase and they will continue to be marginalized in positions of little added value and responsibility



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# Objectives and Outcome

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## ▶ Objectives

1. To overall analyse the context
2. To reflect on the main reasons of the low presence of the women in STEM (Science, Technology, Engineering and Mathematics)
3. To propose some actions for improvement

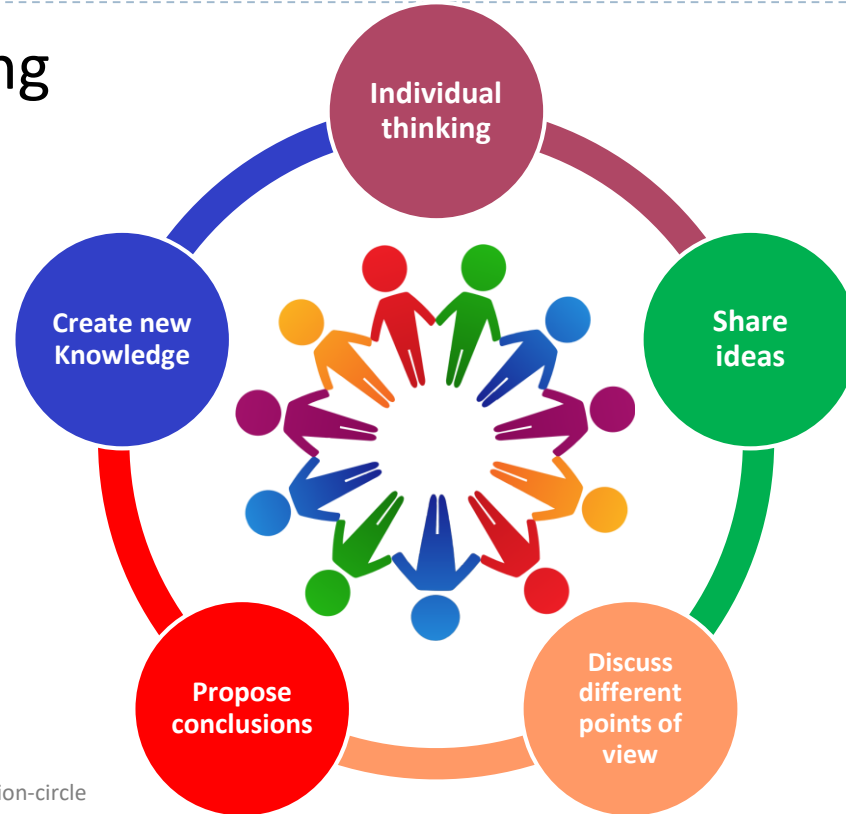
## ▶ Expected outcome: How to increase women presence in science and engineering

Image: <http://sarabbit.openphoto.net/gallery/>, Sarah Klockars-Clauser for <http://openphoto.net/gal>

# Methodology

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## ▶ Cooperative learning



Multicultural Cooperation Circle., by GDJ - From Pixabay for  
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# Studies: Topic for discussion #1

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▶ Is there any age-dependent gender difference in primary school students in aspects related to math, sciences, technology?

▶ Is it a self-esteem problem? How to improve it?

▶ Are teachers aware of students' perceptions?

▶ Others?

## Family: Topic for discussion #2

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▶ What is the role of the family in the career selection?

▶ Are girls encouraged to study engineering or not?

▶ How to balance dedication to family and work?

▶ Others?

## Visibility of the scientists: Topic for discussion #3

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- Is the presence of experts in the media balanced?

- What do you think about the “Glass ceiling”?

- Is it positive to take actions, carry out events, etc. specific promotion of technology among women?

- Are the “Quotas” useful to achieve the balance?

▶ Others?

## **Social impact:** Topic for discussion #4

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- ▶ When women choose to study science, they mostly do so in the health field. Would it be important to show the social impact of STEM?

- ▶ Are engineering jobs to care for and improve society?

- ▶ Any kind of problems that would not be solved if we do not have women in STEM?

- ▶ Others?





# New RAN TEchniques for 5G UltraA-dense Mobile networks - TeamUp5G

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**Project start date:** 01/01/2019

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