

# ***Diverse Dynamics?***

## *Women Cultivating the Science Ecosystem*



**Dr. Bea Maas**

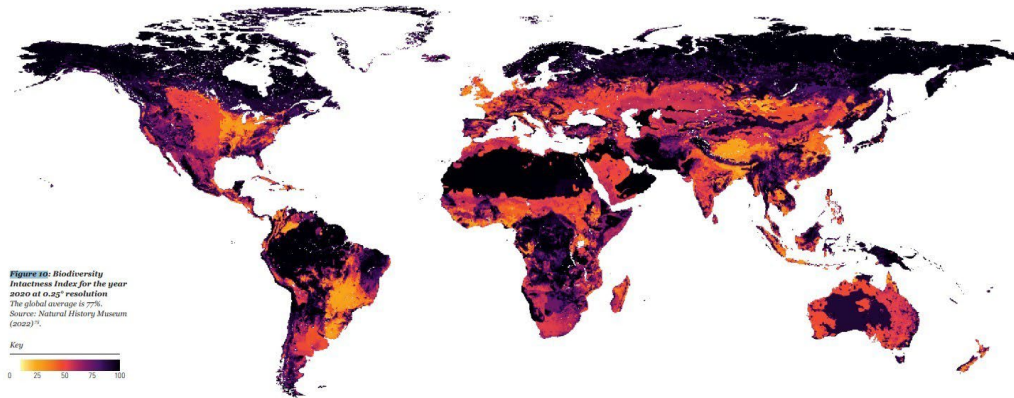
University of Vienna – Austria

Keynote to International Women's Day 2024

National Library of Kosovo

University of Hasan Prishtina

# BioDIVERSITY CHALLENGES ARE GLOBAL



*But they start at „small“...*



*"Describe what you can bring to this company."*

# IMPACTS OF DIVERSITY



“Companies ranking highly for **gender diversity** performed 16% better, and those with greater **ethnic diversity** performed 35% better than lower ranking organisations”

Harvard Business Review, 2016

Forbes

LEADERSHIP STRATEGY

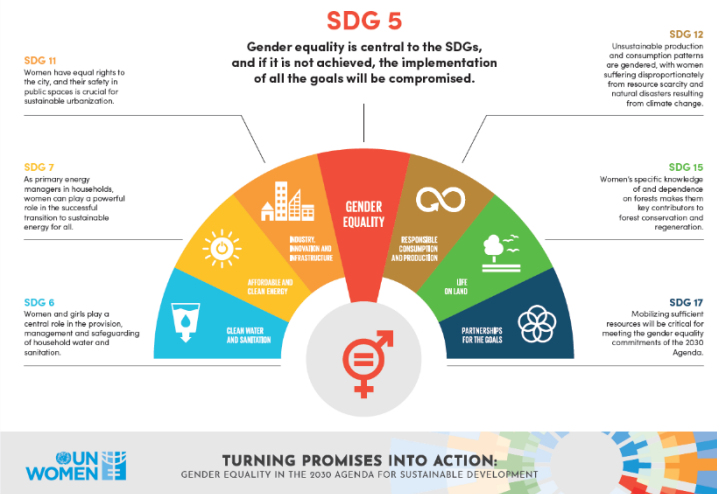
## Diversity Confirmed To Boost Innovation And Financial Results

“Companies with above-average diversity produced a greater proportion of **revenue from innovation** (45% of total) than from companies with below average diversity (26%). This 19% innovation-related advantage translated into overall **better financial performance.** “

Forbes, 2020

„Gender equality is central to the SDG's, and if not achieved, the **implementation of all the goals** will be compromised“

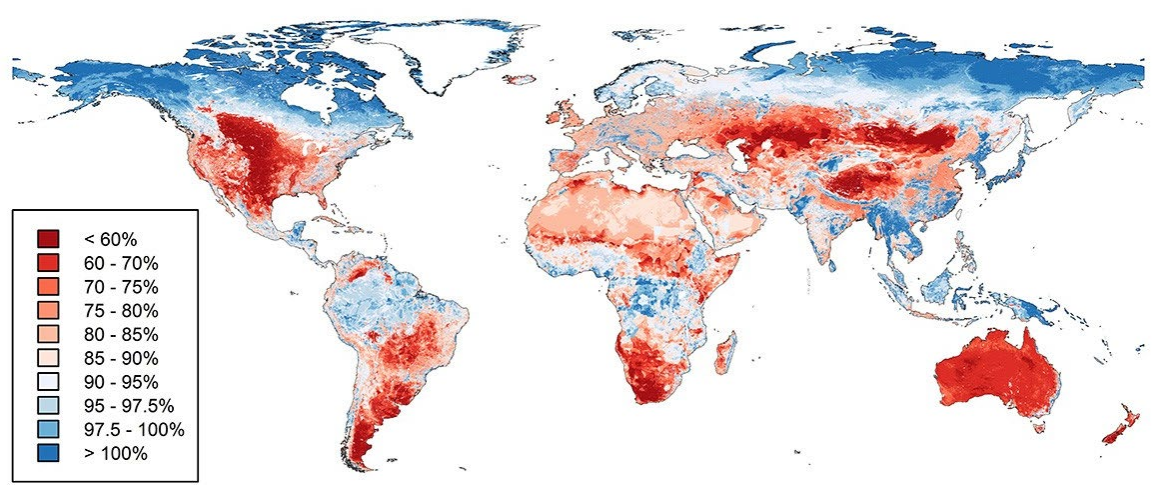
UN Women, 2019



# DIVERSITY

*Key to resilient systems*

*We are missing essential perspectives to address global environmental challenges!*  
*Newbold et al. 2016/Science*



*Diversity is key to implementation*  
*e.g., Maas et al. 2019/BiolCons;*  
*2020/Nature EvoEvo*



# DIVERSITY

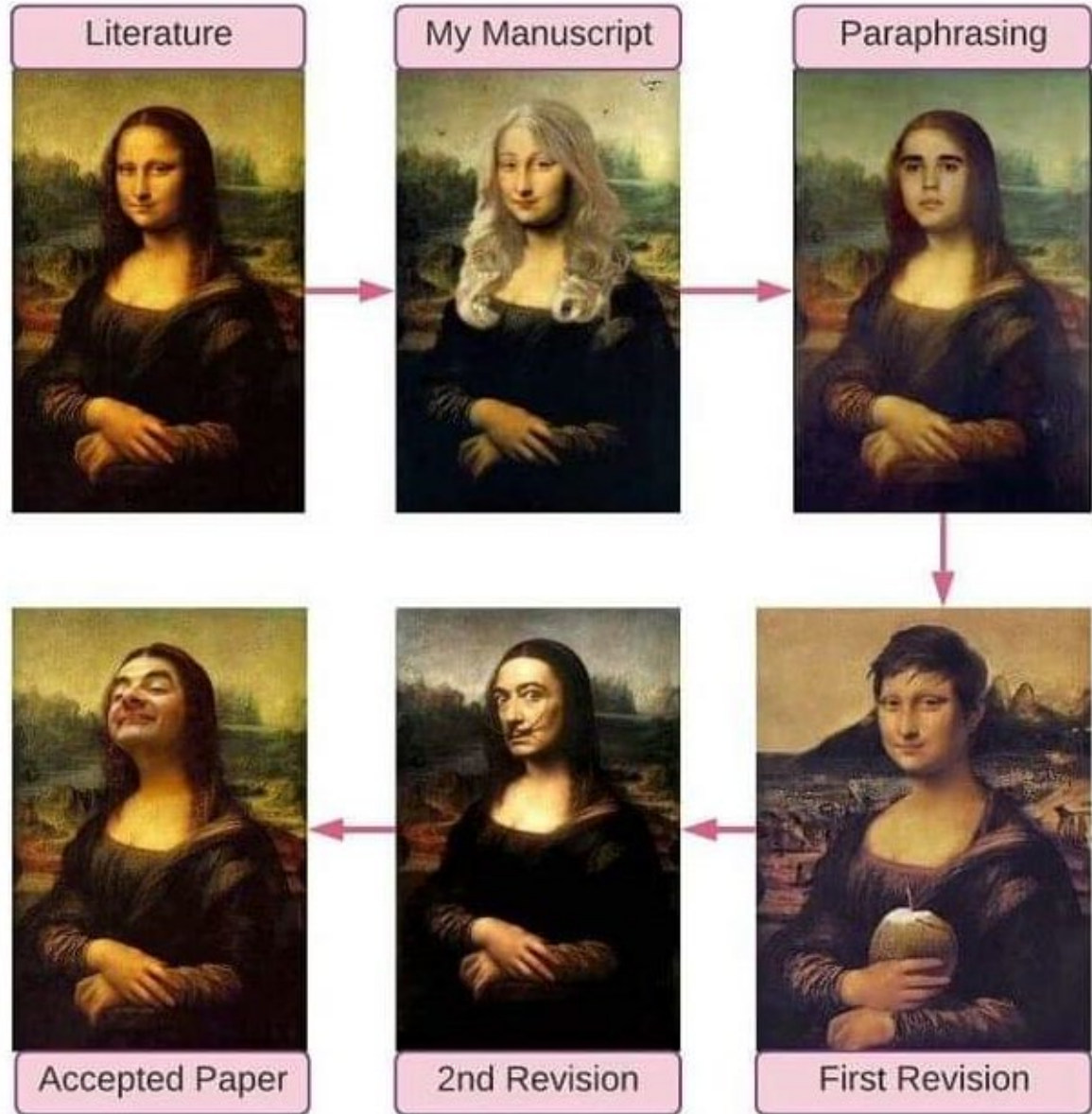
*Key to resilient systems*

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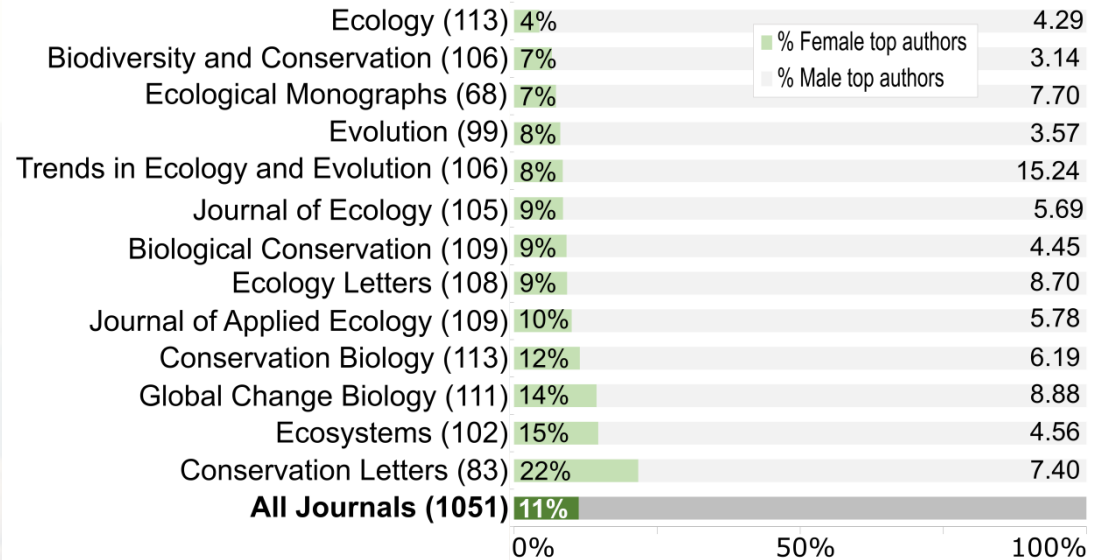
***How diverse is the author- and leadership in ecology & conservation?***

# DIVERSITY IN ECOLOGY

*Who are the top publishing authors?*

## **METHODS:**

- ✓ Selected 13 leading ecology journals (IF-based)
- ✓ Identified top publishing authors (~100/journal; WoS)
- ✓ Analysed ratios and trends (1945-2019)



*\*excluded some journals due to focus on original research/papers*

Maas et al, 2021 – Conservation Letters

**DATA:** 1051 top publishing authors  
+ binary gender + country/affiliation  
+ author position + citations + GDP/capita/country-pop.size

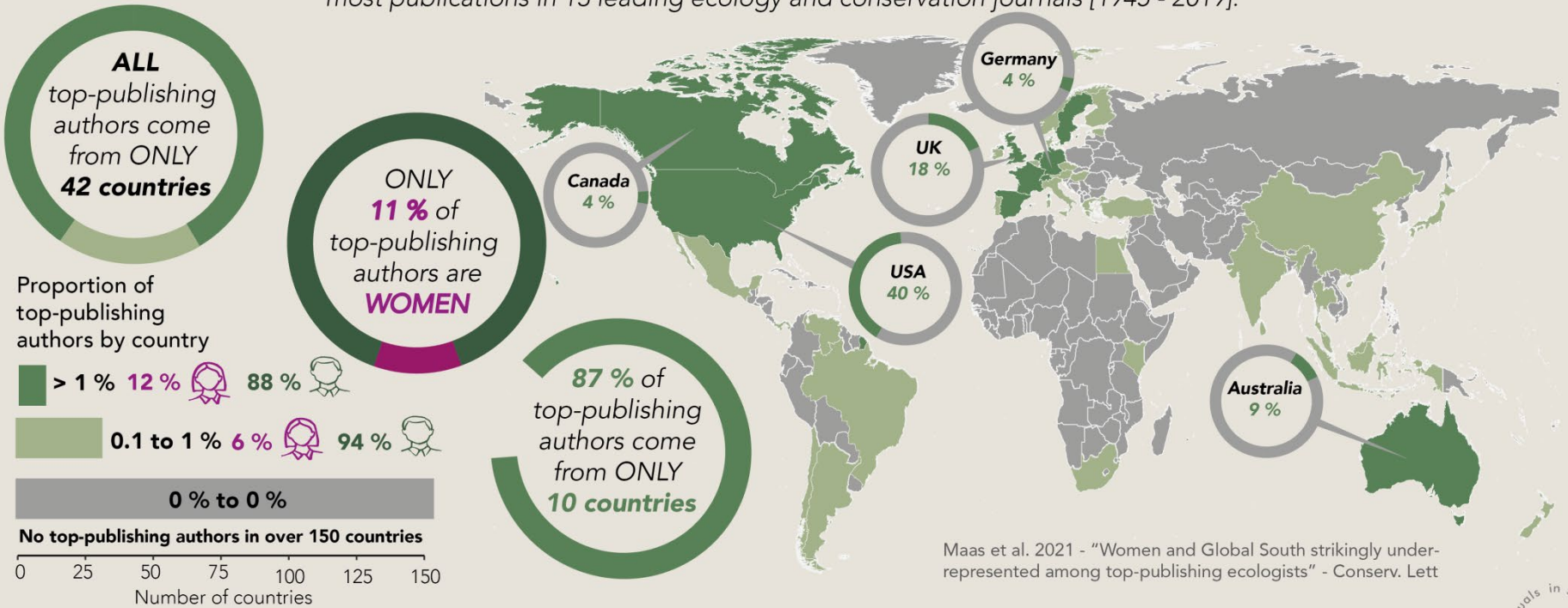
**Total list of top authors: 11% women; > 75% from only 5 countries!**

# RESULTS

## Gender and geographic bias among top authors

### Lack of diversity among top-publishing ecologists

The study examined the gender and affiliations of 1051 top-authors, those scientists with the most publications in 13 leading ecology and conservation journals [1945 - 2019].



*How can we address this bias?*



# RECOMMENDATIONS

## Promoting diversity & inclusion in ecology

### Towards a Diverse and Inclusive Scientific Leadership

#### 10 Key actions

**1. Increase diversity and inclusion among collaborators and co-authors**

**2. Recommend new editors from under-represented groups (e.g. women) and under-represented countries**



**3. Promote team's ethnic and geographic diversity**

**4. Use alternative metrics in recruitment and promotions**

**5. Support scientist on parental leave**

**6. Identify, create and evaluate measures for enhancing and safeguarding inclusive scientific communities**



**7. Commit to current ethical guidelines**

**8. Increase editors from diverse backgrounds and under-represented groups and guidance on inclusive behaviour**

**9. Editorial boards should promote diversity, equity and inclusion**

**10. Increase transparency of publishing process (i.e. editor and reviewer assignment)**



Academic leaders are assigned based on high publication rates

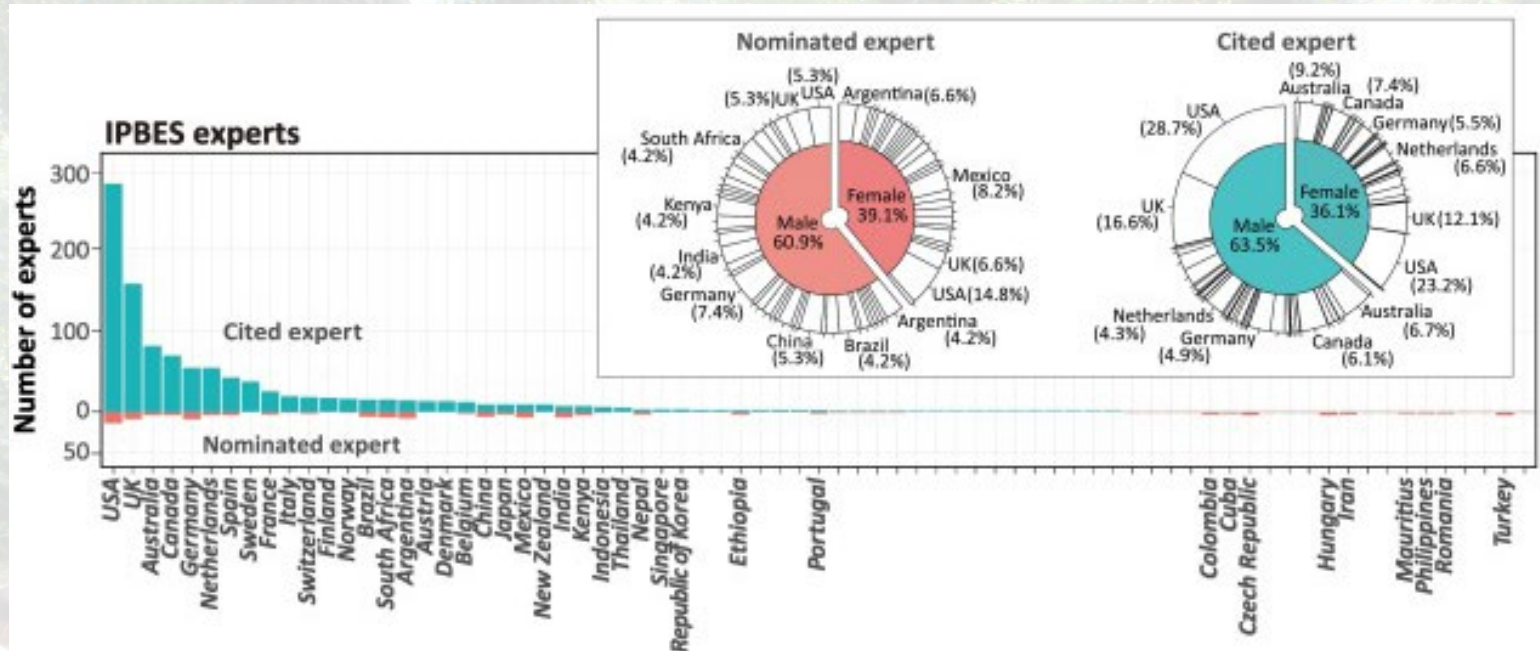
Leadership in academic societies is related to high publication rates

Maas et al. 2021 - "Women and Global South strikingly underrepresented among top-publishing ecologists" - Conserv. Lett

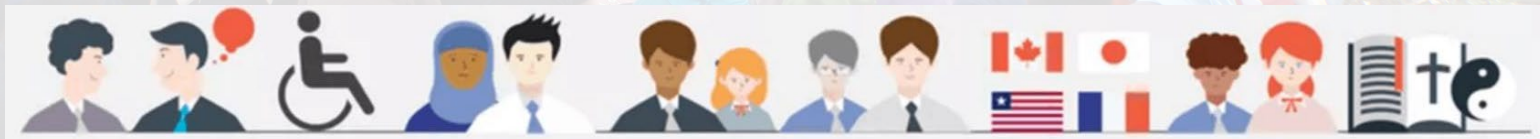
(e.g., Ocampo-Ariza et al. 2023/ Persp. Ecol. Evol. – Global South Leadership; Mahdjoub et al. 2023/Trends Eco. Evo. – Inclusive Editorial Boards)

# DIVERSITY ACROSS ALL LEVELS

*We need to address and apply DEI in a broader context*



(e.g., Mori et al. 2023/ Trends Eco. Evo. – Biased Policy Efforts)



*Starting with our own (implicit) bias....*

# OVERCOMING IMPLICIT BIAS

**Unconscious attitudes & beliefs**, unaware gut reactions and subconscious feelings, behaviours & judgement towards people



**can directly affect our outcomes**, success and well-being at different workplaces, networks, societies, groups, etc.

***But we can train against these biases!***

# ASSESSMENT & EVALUATION

*How diverse is (y)our community?*

## ❖ **Self-Assessment** – e.g.,

- Check author ratios
- Check hiring ratios
- Take Tests (Harvard IAT)
- Take Trainings (Services)

## ❖ **Key tasks** – e.g.,

- Alternative metrics
- Equal opportunities
- Transparency
- Climate Surveys

**4. Evaluate**

**1. Self-Assess**



**2. Develop**

e.g.,  
double or  
triple blind  
reviews;  
boards;  
roles

**3. Implement**

***New practices should be accompanied by measures and evaluation***

# LET'S START TODAY!

<https://implicit.harvard.edu/implicit/takeatest.html>



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## Weight IAT

**Weight ('Fat - Thin' IAT).** In this IAT, you will be asked to categorize silhouettes of people who are fat and people who are thin as well as positive and negative words.

## Race IAT

**Race ('Black - White' IAT).** In this IAT, you will be asked to categorize White and Black faces as well as positive and negative words.

## Age IAT

**Age ('Young - Old' IAT).** In this IAT, you will be asked to categorize older and younger faces as well as positive and negative words.

## Gender-Science IAT

**Gender - Science.** In this IAT, you will be asked to categorize male-associated words and female-associated words as well as words associated with liberal arts and science.

## Disability IAT

**Disability ('Physically Disabled – Physically Abled' IAT).** In this IAT, you will be asked to categorize figures representing physically disabled people and physically abled people as well as positive and negative words.

## Skin-tone IAT

**Skin-tone ('Light Skin - Dark Skin' IAT).** In this IAT, you will be asked to categorize light-skinned faces and dark-skinned faces as well as positive and negative words.

## Gender-Career IAT

**Gender - Career.** In this IAT, you will be asked to categorize typical male names and typical female names as well as words associated with career and family.

## Sexuality IAT

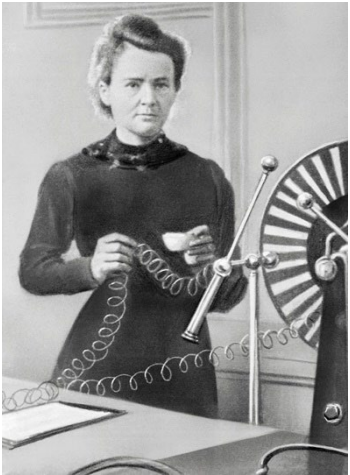
**Sexuality ('Gay - Straight' IAT).** In this IAT, you will be asked to categorize words and symbols representing gay and straight people as well as positive and negative words.

## Religion IAT

**Religion ('Religions' IAT).** In this IAT, you will be asked to categorize images or words culturally associated with Jewish people, Christian people and Muslim people as well as positive and negative

*... and continue everyday!*

# FEMALE ICONS IN SCIENCE



*Better together: We can learn a lot from each other!*

# LET'S DISCUSS!

## ***How to promote diversity across different levels?***

*(authorship; teaching; hiring; supervision; teams; collaborations; etc.)*

## ***Perspectives and visions for the future***

*(topics for research; challenges to overcome; opportunities for action; etc.)*



Credit: Lyubov Ivanova

# THANK YOU

Many thanks for your attention, support and interest – especially to all who stand behind this work and drive it forward!

*Looking forward to our discussions!*

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