

# Addressing diversity, equity and inclusion in large collaborations

An Example



Juliane van Scherpenberg  
on behalf of the MAGIC collaboration's DEI task force

# What is MAGIC?

- A system of two Imaging Atmospheric Cherenkov Telescopes (IACTs)
- Located on La Palma, Canary Islands, Spain
- Designed to study very-high-energy gamma-rays from astrophysical sources
- Operation of first telescope started in 2004



# Who is MAGIC?

- An international scientific collaboration
  - More than 300 members
  - From more than 40 institutions
  - Spread across 13 countries
- Physicists, technical and administrative staff
- All career stages



# Diversity, Equity and Inclusion in MAGIC

In 2020, the MAGIC DEI task force started

- Born out of the Outreach working group
- Early-Career-Committee started around the same time



Marina  
Manganaro



Alicia  
Lopez-Oramas



Dominik  
Elsässer



Daniela Dorner



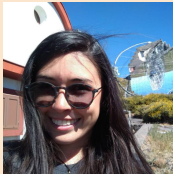
Lea Heckmann



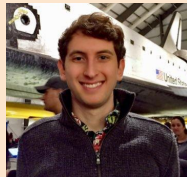
Jelena  
Strišковиć



Juliane van  
Scherpenberg



Serena  
Loporchio



Jarred Green



Eduardo  
Colombo



David Green



Martin Will



Alessio Berti



Marine Pihet

# Diversity, Equity and Inclusion in MAGIC

Clear from the beginning: **We want to do a survey**

Profited immensely from engagement by Lea Heckmann in the Max Planck PhDnet

- Analysis lead of the 2019 [Max Planck PhDnet survey](#)
- Actively involved in the design of the PhDnet survey 2020
- Until recently, MAGIC DEI survey coordinator



# The MAGIC DEI Survey: **Goals**

- Get an overview of demographics and potential minorities
- Explore differences between subgroups based on
  - Gender
  - Age
  - Career stages
  - Countries
  - ...
- Evaluate
  - Working conditions
  - Satisfaction with the collaboration
  - Recognition in the collaboration
  - Conflicts
  - Mental health
  - ...



Credit: Giovanni Cembella

**I will not show any data from the surveys.**

**Our promise of data protection to the participants must be upheld.**

# The MAGIC DEI Survey: **Contents** (1 / 2)

- **Demographics**

- Age
- Gender
- Ethnicity
- Length of membership in MAGIC
- ...

- **Recognition**

- Publication/Conference/Authorship rules
- Engagement in the collaboration
- Value of and opportunity to give opinions in various circumstances

- **Working Conditions**

- Employment level (permanent/temporary?)
- Country of employment (home/foreign?) Language barriers
- Caring responsibilities
- Satisfaction with different aspects of working in the collaboration
- Considering to quit academia (why? How often?)
- Holiday taking
- Fraction of working time spent on different tasks

# The MAGIC DEI Survey: **Contents** (2 / 2)

- **Conflicts**

- Frequency and place of sexualized harassment and bullying
- Relationship with the perpetrator
- Discrimination
- Microaggressions
- Gender identity
- Knowledge about conflict reporting mechanisms

- **Mental Health**

- Evaluated presence and severity of depression
- Based on Patient Health Questionnaire module [PHQ-8](#)





# The MAGIC DEI Survey: **Methods**

- Many questions based on PhDnet survey
- Many iterations within task force and with management for design of first survey questionnaire
- Subsequent surveys were much less effort!



# The MAGIC DEI Survey: **Methods**

- Survey Tool: [LimeSurvey](#) hosted by [GWDG](#)
- Closed access mode: personal token sent to each MAGIC collaboration member
- Data Analysis: [N2 Survey Framework](#) with slight [adaptations](#)

You can find the complete questionnaire of the survey [here](#).

And more detailed information on the survey in [PoS\(ICRC2023\)1610](#).



# The MAGIC DEI surveys: **Facts and figures**

**1st survey** ran in December **2020**

Response rate ~30%

**2nd survey** ran in June **2022**

a few questions changed based on lessons and feedback from 1st survey

Response rate ~43%

**3rd survey** ran in July **2024**

Kept questions almost exactly the same as in 2nd survey

Response rate ~31%



# What happened next?

- Feedback was very positive
- A lot of support from management bodies of the collaboration
  
- Results were presented in collaboration meetings
- 2022 survey results summarized in written report
  
- Increased awareness for DEI topics in the collaboration
- Several changes to improve the situation

# Conflict reporting mechanisms

- Introduced in 2021, after the 1st survey
- Appointing of Ombudsperson
- Form in which conflicts can be reported anonymously to Ombudsperson
- Multiple conflicts reported over the last years
- Added question in 2024 survey to evaluate effectiveness of reporting mechanism



# Code of Conduct

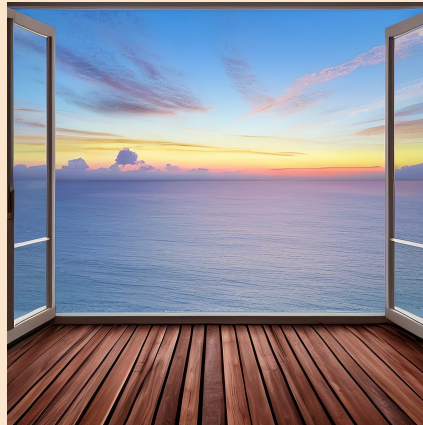
- Developed in 2021, after 1st survey
- Distributed to the collaboration
- Revised earlier this year

# Improving author recognition

- Authorship rules were adapted
- “Author contributions” paragraph at the end of publications
- Still subject of discussion

# Transparency and communication

- Improvement of transparency and communication of
  - Organizational structures
  - Appointment of committee members
  - Decision taking
- Early Career and DEI representatives contribute to discussions at management level

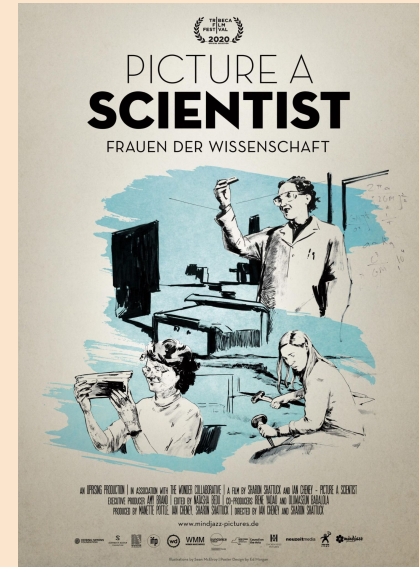


# More efforts from the MAGIC DEI task force

Data from surveys lay groundwork for ongoing support of actions undertaken by DEI task force

Movie screening *Picture A Scientist* organized in spring 2022

- Made available to the collaboration for one week
- Two “watching parties”
- Round table in the following week to discuss the movie





# More efforts from the MAGIC DEI task force

Workshops on harassment and discrimination as part of in-person collaboration meetings

1st workshop in February 2024 in Padua

- Mostly **early career researchers** participated
- Sexualized **harassment**
- How to be an **active bystander**
- Result: *Bystander Guidelines* written by workshop participants

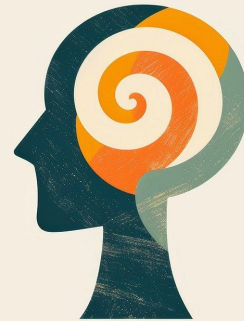
2nd workshop in July 2024 in Lodz

- **Microaggressions**
- Higher fraction of **senior researchers** participated

# More efforts from the MAGIC DEI task force

## Coping with stress and mental health issues

- Stress management workshop (online) in June 2023
- Offers of mindfulness sessions and online Yoga by former MAGIC member



## In conclusion...

- Making a regular survey the basis of DEI efforts has proven successful
- Considerable amount of work to set up for the first time
- Easy to repeat regularly
- Useful to convince “data-hungry physicists” of importance of the topic
- Has resulted in increased awareness on DEI issues
- Has invoked several positive changes in the collaboration
- Ongoing support from members and management for further actions

**It's worth it!**

# How is your collaboration addressing DEI topics?

## If it isn't yet: Start now!

### Thank you!

Juliane van Scherpenberg  
on behalf of the MAGIC collaboration's DEI task force