#### Cosmo21 Debate 2024

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## Rules

- 1 Each debate round lasts 3 mins 30 secs.
- 2 The clock starts the moment the referee(s) stop(s) reading the question out loud.
- 3 Each round, the contestants must try to win over the audience.
- 4 Each round, the points are awarded by the audience (by sign of hands).
- Sellow-carded contestants must immediately pass the word to their opponent (and can again talk later)

# The referee(s)

- 1 The referee(s) gives the final score.
- 2 The main referee indicates and distributes the penalty points (yellow/red/black)

## **Yellow Cards**

- Talking over the contestant
- 2 rambling
- 3 refusal to engage:
  - not reacting to opponent's last argument
  - not answering an opponent's question

The debate continues throughout yellow cards.

2 Team yellows = 1 Team red = 1 point for the other team

#### **Red Cards**

- 1 Not passing on the word when yellow carded
- Personal attacks
- 3 manipulation of the audience
- 4 Insults disguised as a question.

The debate continues throughout red cards.

1 personal red = 1 team red = 1 point for the other team

#### **Black Cards**

- Offences against decency or good sportsmanship
- refusing to debate a topic or opponent
- causing disorder
- Refusing to shake the opponent's hand after the referee announced the points

Black stops the debating round.

Elimination of the person + 1 point for opposing team for each round the eliminated team member cannot debate anymore

## 30 secs Testround

Is yoga a real sport?

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When simulators apply for funding for their simulations, should there be a mandatory 30% crowdfunding component of their total budget, in order to force them to optimize how useful their simulations are for the community?

We have zero cosmological results yet, but processing and storing Euclid's data has already cost us much more than constructing and launching the actual satellite. Does this mean we suck at data analysis?

If we are always lagging behind the ML expertise of google, and if we have much fewer resources than google, should we not give our data to google and have them analyze it for us?

Debate what needs to happen for men and women to be friends, and whether this is harder or easier than ever to achieve in today's climate.

Think of the Copernican Revolution or how dark energy replaced the static universe paradigm. Can ML discover paradigm shifts that are as revolutionary?

Is explainability of machine learning needed, or is reliability enough?

Humans are social. This makes humans imitate their peers, even if rationally they should take a different action. This creates a herd. The herd can be wrong even though all of its members secretely know the truth. Do we have a herding problem in any of the research fields covered by Cosmo21?

If Bayesian = principled then Machine Learning = ?

Particle physics also measures neutrino masses and also hunts for dark matter. If cosmology and particle physics arrive at discrepant results, where is the mistake?