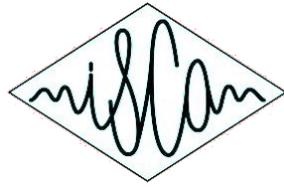


Final Session - Starts 14:25

14:25 Clarity Prediction Challenge: Best Systems and Student Contribution Prizes

14:35 CPC discussion and Future Directions

15:00 Workshop Closes



Clarity Challenge Prizes



Best Systems Prize

 1st Place \$1000

 2nd Place \$500

 3rd Place \$250

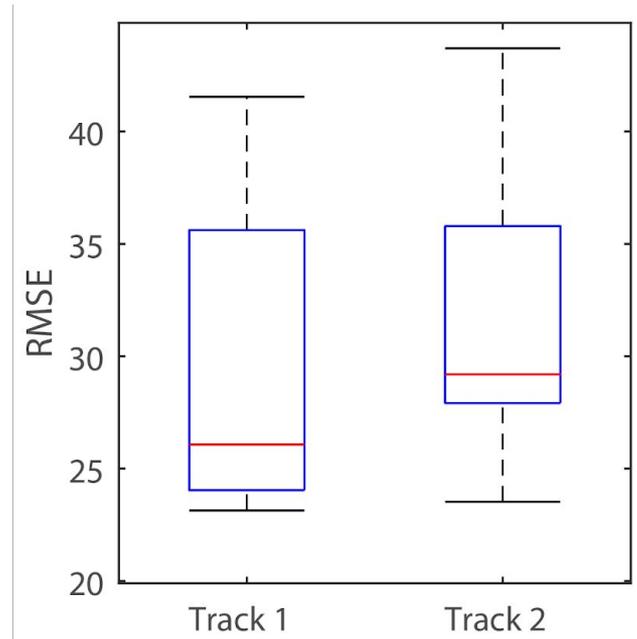
Student Contribution Prize

 1st Place \$1000

 2nd Place \$500

 3rd Place \$250

Entrant	Intr.	Track 1 (closed)		Track 2 (open)	
		RMSE ↓	Corr ↑	RMSE ↓	Corr ↑
E30 [22]	Yes	22.5 ± 0.5	0.79	–	–
E32 [23]	Yes	23.1 ± 0.5	0.77	23.5 ± 0.9	0.76
E29 [24]	No	23.3 ± 0.5	0.77	24.6 ± 1.0	0.73
E36 [25]	Yes	24.0 ± 0.5	0.76	29.2 ± 1.2	0.60
E33 [26]	No	24.1 ± 0.5	0.75	28.9 ± 1.1	0.65
E16 [26]	No	24.7 ± 0.5	0.74	30.7 ± 1.2	0.59
E22 [27]	No	25.9 ± 0.5	0.70	32.1 ± 1.2	0.54
E19 [28]	Yes	27.5 ± 0.6	0.66	28.1 ± 1.1	0.63
Base. [1]	Yes	28.5 ± 0.6	0.62	36.5 ± 1.4	0.53
E06 [29]	No	32.0 ± 0.7	0.50	–	–
E34 [29]	No	33.4 ± 0.7	0.43	–	–
E35 [30]	No	35.4 ± 0.7	0.25	35.7 ± 1.4	0.22
Prior	No	36.4 ± 0.7	–	36.2 ± 1.4	–
E31 [31]	Yes	37.2 ± 0.7	0.41	28.3 ± 1.1	0.67
E23 [32]	No	41.5 ± 0.7	0.07	43.7 ± 1.5	0.05
E02 [33]	Yes	–	–	35.2 ± 1.4	0.38
E38 [33]	Yes	–	–	49.7 ± 1.5	0.30



- Not easy to define 'best' - i.e. open vs closed tracks; intrusive vs non-intrusive systems. It's a lot more nuanced than the Clarity Enhancement Challenge.
- After some discussion it was decided:
 - **1st prize to the best non-intrusive system** given that this is a harder task and arguably a more useful approach.
 - **2nd prize to the best intrusive system.**
 - 1st and 2nd prizes would be based on Track-1 (closed set) performance.
 - **3rd prize would go to the best open-set system.** (Generalization very important, but challenge was limited in its power to measure it).
- Important not to take the raw rankings / prizes etc too seriously! Many things make the systems not directly comparable.



Bronze Prize - Best Score on Track 2

Speech Intelligibility Prediction for Hearing-Impaired Listeners with the bBSIM-STI Model

Saskia Röttges^{1,4}, Jana Roßbach^{2,4}, Christopher F. Hauth^{1,4}, Thomas Biberger^{1,4}, Bernd T. Meyer^{2,4}, Rainer Huber^{3,4}, Jan Rennies^{3,4}, Thomas Brand^{1,4}

¹Medizinische Physik, Carl von Ossietzky University, Oldenburg, Germany

²Communication Acoustics, Carl von Ossietzky University, Oldenburg, Germany

³Fraunhofer IDMT, Hearing, Speech and Audio Technology, Oldenburg, Germany

⁴Cluster of Excellence Hearing4all, Germany



Silver Prize - Best Intrusive System

ELO-SPHERES intelligibility prediction model for the Clarity Prediction Challenge 2022

*Mark Huckvale¹, Mike Brookes², Pierre Guiraud², Tim Green¹, Gaston Hilkhuyzen¹,
Alastair H. Moore², Patrick A. Naylor², Stuart Rosen¹, Rebecca Vos²*

¹University College London, UK

²Imperial College London, UK





Gold Prize - Best Non-intrusive System

MBI-Net: A Non-Intrusive Multi-Branched Speech Intelligibility Prediction Model for Hearing Aids

Ryandhimas E. Zezario^{1,2}, Fei Chen³, Chiou-Shann Fuh¹, Hsin-Min Wang², Yu Tsao²

¹National Taiwan University

²Academia Sinica

³Southern University of Science and Technology of China



The Student Prize has been judged by our Student Prize Panel.

- Clarity Project Team +
- Jesper Boldt, GN Advanced Science
- Tobias Goehring, University of Cambridge, UK
- Chas Pavlovic, BatAndCat Sound Labs, UK
- Kateřina Žmolíková, BUT, (CEC1 Student Prize Winner)

Panel members selected a 1st, 2nd and 3rd based on,

- The overall quality of the research.
- The student's apparent contribution to the work.
- The clarity of the presentation.

Student's with links to the organisers/panel were not considered (sorry Zehai :-)



1st Prize

Ryan Zezario, National Taiwan University
MBI-Net: A Non-Intrusive Multi-Branched Speech Intelligibility Prediction Model for Hearing Aids



2nd Prize

Franklin Yohan Alvarez Cardinale, Medizinische Hochschule Hannover,
Predicting Speech Intelligibility using SAMII: Spike Activity Mutual Information Index



3rd Prize

Jana Rossbach, Carl von Ossietzky University, Oldenburg, Germany
Speech Intelligibility Prediction for HI Listeners with Phoneme Classifiers based on Deep Learning

Congratulations to all students who participated.

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Progressed to more complex scenes,

- 2 or 3 interferers
- Interferers can be combinations of noise, speech or music
- Listener turns their head towards target speech (simulated using ambisonics)

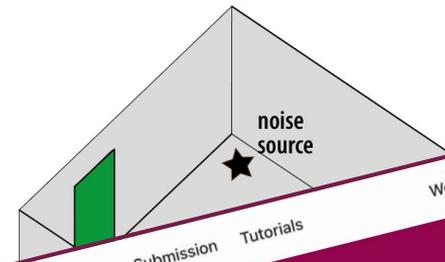
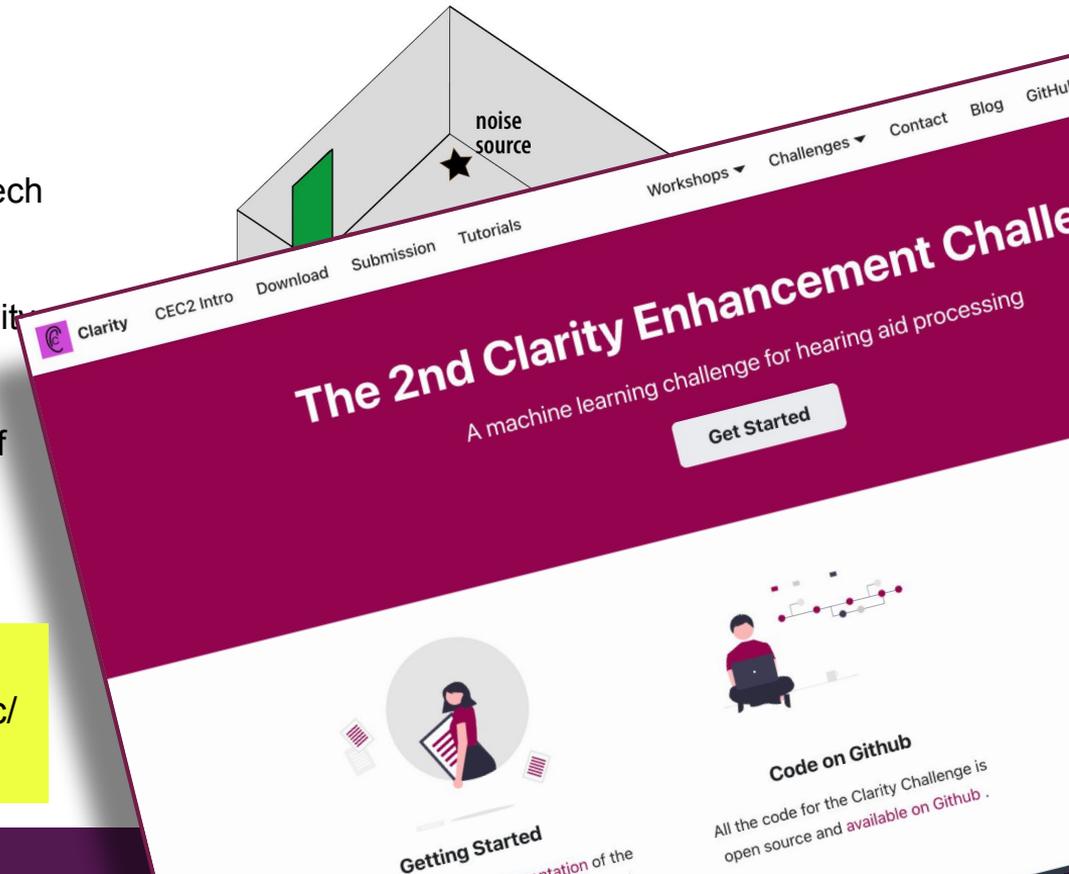
Using Better Ear HASPI as the Objective Intelligibility measure

We will evaluate the top 20 systems with a panel of hearing impaired listeners.

Submission deadline 1st September

For info visit

https://claritychallenge.github.io/clarity_CC_doc/

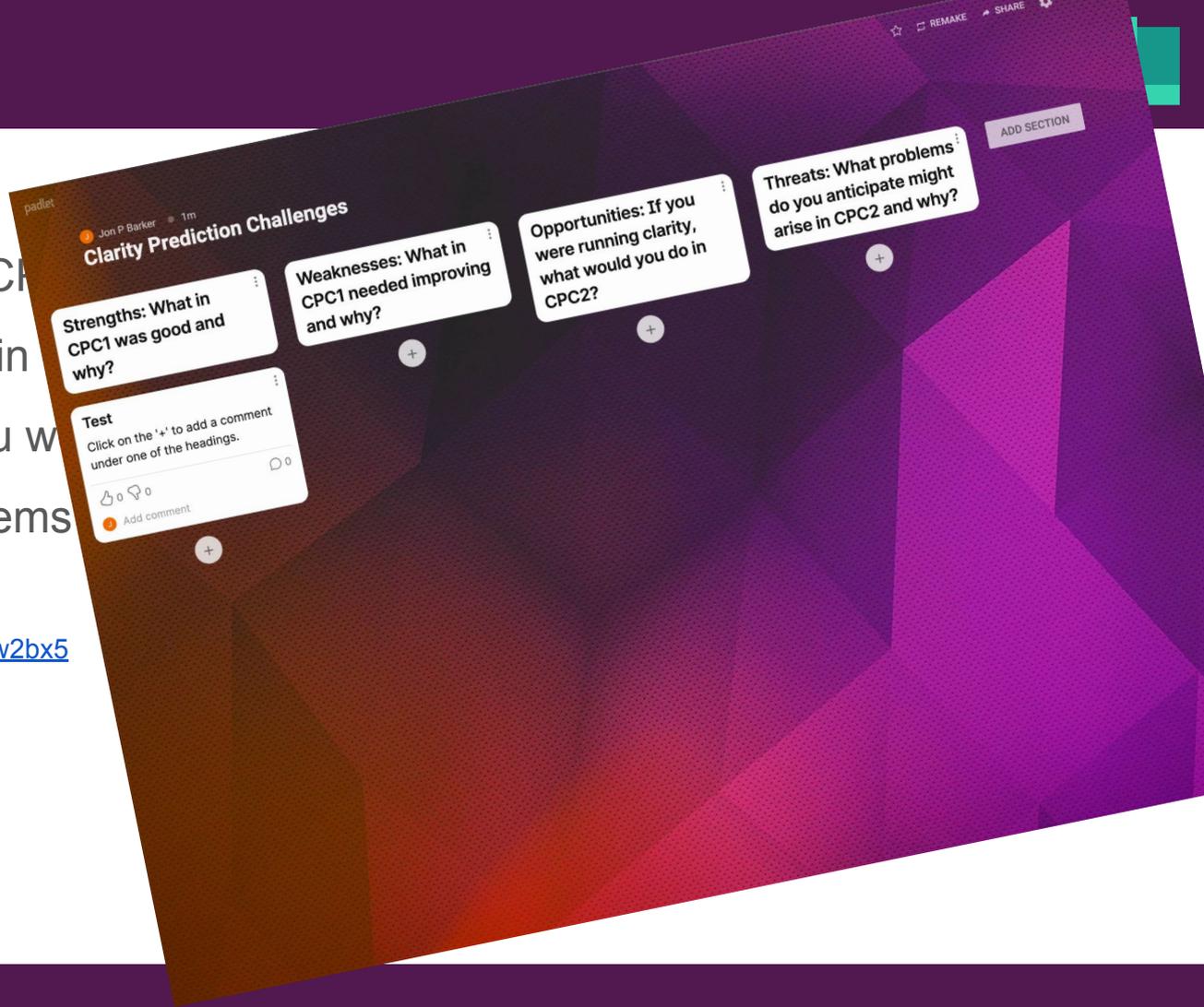


2nd Clarity Prediction Challenge due for 2023

The plan is to use the signals and listening data coming from CEC2.

<https://tinyurl.com/cpcpadlet>

- **Strengths:** What in Clarity was good and why?
- **Weaknesses:** What in Clarity needed improving and why?
- **Opportunities:** If you were running Clarity, what would you do to improve it?
- **Threats:** What problems do you anticipate might arise in Clarity and why?



<https://padlet.com/jpbarker/w8pss2kz3z2w2bx5>

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15:00 Workshop Closes