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
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
<table>
<thead>
<tr>
<th>Entrant</th>
<th>Intr.</th>
<th>Track 1 (closed)</th>
<th>Track 2 (open)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RMSE ↓</td>
<td>Corr ↑</td>
</tr>
<tr>
<td>E30 [22]</td>
<td>Yes</td>
<td>22.5 ± 0.5</td>
<td>0.79</td>
</tr>
<tr>
<td>E32 [23]</td>
<td>Yes</td>
<td>23.1 ± 0.5</td>
<td>0.77</td>
</tr>
<tr>
<td>E29 [24]</td>
<td>No</td>
<td>23.3 ± 0.5</td>
<td>0.77</td>
</tr>
<tr>
<td>E36 [25]</td>
<td>Yes</td>
<td>24.0 ± 0.5</td>
<td>0.76</td>
</tr>
<tr>
<td>E33 [26]</td>
<td>No</td>
<td>24.1 ± 0.5</td>
<td>0.75</td>
</tr>
<tr>
<td>E16 [26]</td>
<td>No</td>
<td>24.7 ± 0.5</td>
<td>0.74</td>
</tr>
<tr>
<td>E22 [27]</td>
<td>No</td>
<td>25.9 ± 0.5</td>
<td>0.70</td>
</tr>
<tr>
<td>E19 [28]</td>
<td>Yes</td>
<td>27.5 ± 0.6</td>
<td>0.66</td>
</tr>
<tr>
<td>Base. [1]</td>
<td>Yes</td>
<td>28.5 ± 0.6</td>
<td>0.62</td>
</tr>
<tr>
<td>E06 [29]</td>
<td>No</td>
<td>32.0 ± 0.7</td>
<td>0.50</td>
</tr>
<tr>
<td>E34 [29]</td>
<td>No</td>
<td>33.4 ± 0.7</td>
<td>0.43</td>
</tr>
<tr>
<td>E35 [30]</td>
<td>No</td>
<td>35.4 ± 0.7</td>
<td>0.25</td>
</tr>
<tr>
<td>Prior</td>
<td>No</td>
<td>36.4 ± 0.7</td>
<td>–</td>
</tr>
<tr>
<td>E31 [31]</td>
<td>Yes</td>
<td>37.2 ± 0.7</td>
<td>0.41</td>
</tr>
<tr>
<td>E23 [32]</td>
<td>No</td>
<td>41.5 ± 0.7</td>
<td>0.07</td>
</tr>
<tr>
<td>E02 [33]</td>
<td>Yes</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>E38 [33]</td>
<td>Yes</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
- 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.
The HIRC Best Systems Prize

Bronze Prize - Best Score on Track 2

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

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

\textsuperscript{1}Medizinische Physik, Carl von Ossietzky University, Oldenburg, Germany
\textsuperscript{2}Communication Acoustics, Carl von Ossietzky University, Oldenburg, Germany
\textsuperscript{3}Fraunhofer IDMT, Hearing, Speech and Audio Technology, Oldenburg, Germany
\textsuperscript{4}Cluster of Excellence Hearing4all, Germany
Silver Prize  - Best Intrusive System

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

Mark Huckvale\textsuperscript{1}, Mike Brookes\textsuperscript{2}, Pierre Guiraud\textsuperscript{2}, Tim Green\textsuperscript{1}, Gaston Hilkuysen\textsuperscript{1}, Alastair H. Moore\textsuperscript{2}, Patrick A. Naylor\textsuperscript{2}, Stuart Rosen\textsuperscript{1}, Rebecca Vos\textsuperscript{2}

\textsuperscript{1}University College London, UK  
\textsuperscript{2}Imperial 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\textsuperscript{1,2}, Fei Chen\textsuperscript{3}, Chiou-Shann Fuh\textsuperscript{1}, Hsin-Min Wang\textsuperscript{2}, Yu Tsao\textsuperscript{2}

\textsuperscript{1}National Taiwan University
\textsuperscript{2}Academia Sinica
\textsuperscript{3}Southern 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 :-(
The HIRC Student Prize

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.
Final Session - Starts 14:10

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14:20 ICPC discussion and Future Directions

15:00 Workshop Closes
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 CPC1 was good and why?
- **Weaknesses**: What in CPC1 needed improving and why?
- **Opportunities**: If you were running Clarity, what would you do in CPC2?
- **Threats**: What problems do you anticipate might arise in CPC2 and why?

https://padlet.com/jpbarker/w8pss2kz3z2w2bx5
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