Measurement Lab takes the position that Internet quality should be measured by metrics beyond traditional bandwidth measurements of "speed" and in a longitudinal, persistent and multi-method manner. We also believe that, as much as possible, data used for public decision-making should be published in the open and produced by open source code.

- Measuring beyond "speed": There are an increasing amount of international goals being set around Internet access, but there are less being set around Internet quality. The ones that do exist, primarily center themselves around "speed", an abstract unit used by Internet Service Providers to sell their services that is commonly interpreted as bandwidth or throughput. "Speed" was a more appropriate indication of Internet quality in the early 2000s when most web pages were simple and static, but in the present-day Internet it falls quite short of representing the quality of a connection and what users can or cannot do while engaging online. As other workshop participants will be well aware, modern web applications are built using a wide variety of techniques and are oftentimes equally if not more impacted by metrics such as packet loss, loaded and unloaded latency, and jitter— most of which are not represented when considering bandwidth or throughput alone. However, even though there is a growing consensus in the Internet Research community that we need a better way to measure Internet quality beyond "speed", it has yet to be replaced by a metric that carries the same global resonance and perceived measurability, which limits decision makers ability to take action.
- Longitudinal measurements: Additionally, evaluating the quality of Internet connectivity toward the public interest requires publicly available, independently verifiable data and information collected persistently over time. Currently, information relevant to the public interest is provided by private companies and cannot be verified publicly, or is provided as a public resource based on user or client-initiated measurements that are sporadic. There does not exist a measurement of persistent and regular intervals of crowdsourced information of Internet measurement. While crowd-sourced, browser-based measurements are incredibly powerful tools for collecting data at massive scales, longitudinal, persistent measurement solutions can provide critical context for the analysis of crowd-sourced data.
- Multi-method measurements: Measurement Lab believes that the more data from different sources and vantage points about the performance of the Internet, the better. Often experts discuss the merits of one methodology over another e.g. single-stream vs. multi-stream, on-net vs off-net. However, rather than choose one methodology, our position is that different measurements provide different signals and you likely need all of them to get a complete picture of the network.

Measurement Lab has been working to improve the health of the Internet with crowdsourced data for over fourteen years. The mission statement to measure the data, save the data, and make it open and useful for the public interest has produced the largest public dataset of Internet measurement with 4 million unique tests taken and made available daily. We'd greatly benefit from being in conversation with our peers thinking about the same topic and look forward

to sharing our perspectives on them as well. If accepted, Lai Yi Ohlsen, Lead Data Scientist and Katherine Townsend, Director would most likely be the individuals in attendance.