INVITATION TO PARTICIPATE IN THE TUS-REC2025 CHALLENGE (MICCAI 2025)

We are excited to announce the launch of the TUS-REC2025 Challenge, which is a part of the 28th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2025), held in conjunction with the 6th ASMUS workshop, September 23rd 2025 in Daejeon, Republic of Korea. The challenge is supported by the MICCAI Special Interest Group in Medical Ultrasound (SIGMUS) and will be presented at its international workshop ASMUS 2025.

❑ **Objective:** Reconstructing a 3D volume from 2D ultrasound (US) image slices enables 3D representations of anatomy without using any external spatial tracking devices. This application is considered beneficial for a wide range of clinical ultrasound imaging tasks. TUS-REC2025 presents a different scanning protocol, in addition to the previous TUS-REC2024 non-rotation-based protocols. With 3D reconstruction as the challenge task, TUS-REC2025 aims to 1) benchmark the model performance on the new rotating data, 2) validate the model generalisation ability among different scan protocols, and 3) provide in open access the new US dataset with accurate positional information.

❑ **Dataset**: *In vivo* US data from forearms of 85 volunteers (170 scans, approximately optically-tracked 272,000 frames in total), including more diverse probe movement such as rotating and tilting at various angles.

❑ **Baseline Code:** An implementation of training a baseline model has been released in the publicly accessible GitHub repository.

❑ **Links to Resources:**
  o Full challenge description
  o Training dataset
  o Training dataset of TUS-REC2024 (Part1, Part2, Part3)

We welcome submissions from all, whether you are an academic, an independent researcher, or an industry expert. We look forward to your participation!

For any questions or issues during participation, please reach out to qi.li.21@ucl.ac.uk.

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