

Theme: Mobile Solution

- Sub theme: Mobile Neural Graphics

Highly realistic rendering has emerged as a promising technology on PC platforms, blurring the boundaries between physical and graphical environments. However, its implementation on mobile platforms faces significant challenges due to the substantial disparity in computational power and the requirement for low-power consumption. This proposal aims to explore the feasibility of implementing advanced graphics rendering techniques into mobile platforms for high-quality graphics rendering.

Therefore, we are looking for new approaches to efficiently incorporate the advanced rendering techniques that can be successfully deployed on mobile devices.

We are interested in (but not limited to) the following list of topics:

- Spatial and temporal upsampling techniques (e.g., super-resolution, frame interpolation/extrapolation) for high-performance rendering on mobile platforms.
- Efficient denoising methods for filtering ray-tracing/path-tracing images at mobile devices.
- On-device neural fields for photorealistic rendering.
- Optimized shader module for real-time mobile rendering.

- ※ It is not limited to AI-based approaches, but non-AI based methods are possible.
- ※ The participants are also encouraged to propose new ideas outside the topics listed above.
- ※ Funding: Up to USD 150,000 per year