Fangzhou Gao

✉ gaofangzhou@tju.edu.cn   🔗 https://arkgao.github.io/

📇 Focus on: 3D Vision, Material Capture   📍 Tianjin, China

🎓 Education

Tianjin University, *Ph.D*   2024 – 2028
Computer Science - Computer Graphics, supervised by Prof. Jiawan Zhang

Tianjin University, *Master*   2020 – 2023
Software Engineering, supervised by Prof. Jiawan Zhang

Tianjin University, *Bachelor*   2016 – 2020
Measurement and Control Technology and Instrumentation

🏛 Publication

Transparent Object Reconstruction

Leverage neighborhood information to estimate correspondence under refraction, addressing color ambiguity in transparent object optimization and greatly improving reconstruction quality.
"RCTrans: Transparent Object Reconstruction in Natural Scene via Refractive Correspondence Estimation",
Fangzhou Gao, Yuzhen Kang, Lianghao Zhang et al. *SIGGRAPH Asia* 2025 (*conference track*)

Adapt the neural rendering to transparent objects and **propose the first method of reconstructing transparent objects with only natural RGB images as inputs.**
"Transparent Object Reconstruction via Implicit Differentiable Refraction Rendering", **Fangzhou Gao**, Lianghao Zhang, Li Wang et al. *SIGGRAPH Asia* 2023 (*conference track*)

Few-image SVBRDF capture

Propose a material-adaptive light pattern guided by importance sampling for SVBRDF capture.
"Sparse SVBRDF Acquisition via Importance-Aware Illumination Multiplexing", Lianghao Zhang, Zixuan Wang, **Fangzhou Gao** et al. *SIGGRAPH Asia* 2025 (**ACM TOG**)

Use exemplar material to simplify lighting estimation for SVBRDF capture under natural lighting.
"EBREnv: SVBRDF Estimation in Uncontrolled Environment Lighting via Exemplar-Based Representation", Li Wang, Jiajun Zhao Lianghao Zhang, **Fangzhou Gao**, Jiawan Zhang, **SIGGRAPH Asia 2025 (conference track)**

Combine near-field and far-field point lighting to separate diffuse and specular reflection.
"NFPLight: Deep SVBRDF Estimation via the Combination of Near and Far Field Point lighting", Li Wang, Lianghao Zhang, **Fangzhou Gao** et al. *SIGGRAPH Asia* 2024 (**ACM TOG**)

Capture SVBRDF under an optimized lighting pattern to maximize lighting sampling efficiency.
"Deep SVBRDF Estimation From Single Image Under Learned Planar Lighting", Lianghao Zhang, **Fangzhou Gao**, Li Wang et al. *SIGGRAPH* 2023 (*conference track*)

Introduce basis material as explicit spatial relation into deep SVBRDF estimation.
"DeepBasis: Hand-Held Single-Image SVBRDF Capture via Two-Level Basis Material Model", Li Wang, Lianghao Zhang, **Fangzhou Gao** et al. *SIGGRAPH Asia* 2023 (*conference track*)