

Pakkapon Phongthawee

Ph.D. Candidate in Computer Vision | Diffusion Models | Neural Rendering | HPC Systems

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Experience

- 2019 – Present 📌 **HPC Admin VISTEC, Rayong, Thailand**
- Manage 200+ GPU cluster (Slurm-based) serving 50+ researchers
 - Maintain BeeGFS distributed storage system (high-throughput data pipelines)
 - Provide technical training and support for researchers in HPC environments
 - Support large-scale training workloads for computer vision and generative AI

Education

- 2019 – Present 📌 **Ph.D. Candidate in Information Science and Technology, VISTEC**
Advisor: *Professor Supasorn Suwajanakorn*
Research in diffusion models, HDR light estimation, and neural rendering. Developed DiffusionLight (CVPR 2024, TPAMI 2026) for HDR environment recovery via chrome-ball inpainting and contributed to NeX (CVPR 2021, TPAMI 2023) for Real-Time multi-view neural rendering.
- 2014 – 2019 📌 **B.Sc. in Mathematics, Silpakorn University**
Advisor: *Professor Noppadol Chumchob*
Thesis on image inpainting using numerical methods.

Research Publications

- 1 W. Chinchuthakun, **P. Phongthawee**, A. Raj, V. Jampani, P. Khungurn, and S. Suwajanakorn, “DiffusionLight-Turbo: Accelerated Light Probes for Free Via Single-Pass Chrome Ball Inpainting,” *IEEE Transactions on Pattern Analysis & Machine Intelligence*, no. 01, pp. 1–14, 📄 DOI: 10.1109/TPAMI.2026.3660066.
- 2 **P. Phongthawee** et al., “DiffusionLight: Light Probes for Free by Painting a Chrome Ball,” in *2024 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024, pp. 98–108. 📄 DOI: 10.1109/CVPR52733.2024.00018.
- 3 S. Khwanmuang, **P. Phongthawee**, P. Sangkloy, and S. Suwajanakorn, “StyleGAN Salon: Multi-View Latent Optimization for Pose-Invariant Hairstyle Transfer,” in *2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023, pp. 8609–8618. 📄 DOI: 10.1109/CVPR52729.2023.00832.
- 4 **P. Phongthawee**, S. Wizadwongsa, J. Yenphraphai, and S. Suwajanakorn, “NeX360: Real-Time All-Around View Synthesis With Neural Basis Expansion,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 45, no. 6, pp. 7611–7624, 2023. 📄 DOI: 10.1109/TPAMI.2022.3217957.
- 5 S. Wizadwongsa, **P. Phongthawee**, J. Yenphraphai, and S. Suwajanakorn, “NeX: Real-Time View Synthesis with Neural Basis Expansion,” in *2021 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021, pp. 8530–8539. 📄 DOI: 10.1109/CVPR46437.2021.00843.

Skills

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| Languages | 📌 English (CU-TEP: 97, TOEFL-ITP: 513), Thai (Native). |
| Machine learning | 📌 Python, PyTorch, PyTorch-lightning, OpenCV, Diffusers, Stable Diffusion |
| HPC Infrastructure | 📌 Slurm, Proxmox, Docker, Singularity, BeeGFS, Linux (Ubuntu, Rocky) |
| Web | 📌 Vue.js, Node.js, PHP (LAMP stack), SQL |
| Misc. | 📌 PC hardware/server assembly, LaTeX |