Zhimin Fan

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Education

B.S. in Computer Science and Engineering   2019.9-2023.6
     Southeast University, China   (GPA: 3.98/4.00,   Avg: 93.25/100)

M.S. in Computer Science and Technology   2023.9-2026.6 (Expected)
     Nanjing University, China

Publications

Specular Polynomials

Zhimin Fan, Jie Guo, Yiming Wang, Tianyu Xiao, Hao Zhang, Chenxi Zhou, Zhenyu Chen, Pengpei Hong, Yanwen Guo, Ling-Qi Yan

ACM Transactions on Graphics (Proceedings of SIGGRAPH 2024)

A polynomial formulation of specular constraints (multivariate & bivariate), converted into univariate polynomials using resultants, then efficiently solved

Conditional Mixture Path Guiding for Differentiable Rendering

Zhimin Fan, Pengcheng Shi, Mufan Guo, Ruoyu Fu, Yanwen Guo, Jie Guo

ACM Transactions on Graphics (Proceedings of SIGGRAPH 2024)

Importance sampling light path derivatives using a deterministic mixture of primal and differential distributions, with the optimal mixture weight conditioned on the BSDF of each vertex in the path prefix

Manifold Path Guiding for Importance Sampling Specular Chains

Zhimin Fan, Pengpei Hong, Jie Guo, Changqing Zou, Yanwen Guo, and Ling-Qi Yan

ACM Transactions on Graphics (Proceedings of SIGGRAPH ASIA 2023)

Importance sampling specular chains with seed placement using continuous probability distributions reconstructed from historical samples

Awards

National Scholarship, Nanjing University	2024
First-class academic scholarship, Nanjing University	2023
President Scholarship, Southeast University	2021
National Scholarship (1%), Southeast University	2020
Gold Medal at **ACM-ICPC** Asia Regional Contest	2020
Tingbiao Jiao Scholarship, Southeast University	2020
Provincial First Prize at Chinese Physics Olympiad	2018
Provincial First Prize at National Olympiad in Informatics in Provinces	2016, 2017

Services

Technical paper reviewer: SIGGRAPH Asia (2024), TVCG (2024), EG (2025)