

# Xiang Yangcheng

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## Reserch Interests

**Physics-based Deep Learning / Differentiable Fluid Simulation.** I focus on methods that combine traditional differentiable simulation with deep learning. I'm particularly interested in simulations of fluids, deformable bodies, and clothes.

## Education

### Hokkaido University

2023/10 - 2025/08 (Expected)

M.Sc. in Computer Science, major in Physics-based Simulation

Sapporo, Japan

- Laboratory of Information Media Environment. Fortunately supervised by Prof. Yoshinori Dobashi
- GPA 3.95/4.0
- Graduate Thesis (expected): "PISG: Physics Informed Nerual Fluid Guiding From Sparse Videos"
- A+ Courses: Advanced Computer Graphics, High Performance Computing, Advanced Computer Networks etc.

### Beijing Forestry University

2017/09 - 2021/06

B.Sc. in Information System, major in Computer Graphics

Beijing, China

- GPA 88.75/100 & 3.67/4.00, Rank 8/62
- Graduate Thesis: "FEM-based Real-time Brittle Fracture Simulation of Tree Branches"
- Teaching Assistant for *Physics-based Computer Animation (Spring 2021)*
- A+ Courses: Physics-based Computer Animation, Operating Systems, Computer Architecture, Computer Networks, C++ Programming etc.

## Publications

- **Yangcheng Xiang**, Yoshinori Dobashi: *"EPINF - Efficient Physics Informed Dynamic Neural Fluid Fields Reconstruction From Sparse Videos"*. Technical Group on Artistic Image Technology (AIT 2025).
- Tianchen Hao, Jinxian Pan, **Yangcheng Xiang**, Xiangda Shen, Xincheng Li and Yanci Zhang: *"Thunderscapes: Simulating the Dynamics of Mesoscale Convective System"*. Proceedings of the ACM on Computer Graphics and Interactive Techniques 7 (2025): 1 - 15. (Accepted)

## Experience

### IEG, Tencent Games

2025/01 - Now

Research Intern (Physics-based Deep Learning)

Shanghai, China

- Research on Physics-Informed Neural Networks (PINNs) coupled with fluid simulations.

### Horizon3D Games

2023/05 - 2024/05

Game Physics Animation Engine R&D (Full-time for 2023/05 - 2023/10, Intern for 2023/10 - 2024/05)

Beijing, China

- Develop Chaos Cloth Engine in Unreal Engine 5 for X51 games.

### Perfect World Games

2021/06 - 2023/05

Game Physics Engine R&D (Full-time)

Beijing, China

- Develop NVIDIA PhysX/Bullet Engine to support realistic physical animation.

## Skills

- **Programming Languages:** C++/CUDA/CMake (proficient), Rust, Python, Vulkan, C#, Latex
- **Game Engine:** Unreal Engine 5 (proficient at Chaos Physics Engine dev), Unity3D
- **3D Softwares:** Houdini (proficient at Houdini HDK dev), Blender
- **Natural Languages:** English(TOEIC 753), Japanese(N2), Mandarin Chinese(native)

## Awards

### Full-Scholarships

2023, 2024

Graduate School of Information Science and Techonology, Hokkaido University

Sapporo, Japan

### The First Prize Scholarship

2018, 2019, 2020

School of Information Science and Techonology, Beijing Forestry University

Beijing, China

Last Updated on March 10, 2025