Modeling Plant Life in Computer Graphics

Conclusion

Siggraph 2016 Course

Sören Pirk, Bedrich Benes, Takashi Ijiri, Yangyan Li, Oliver Deussen, Baoquan Chen, Radomír Měch



What did we learn?

- Introduction to vegetation modeling in computer graphics.
- Plant anatomy, plant growth, and environmental response as a way to model plant geometry.
- Environmental response algorithms, such as space colonization and self-organizing model.





What did we learn?

- Algorithms for tree and flower reconstruction from various data sources, such as point sets, images, videos and CT.
- Inverse Procedural Modeling of Trees.
- Sketch-based interface for plant modeling.





Open problems

1. Modeling

Can we algorithmically describe a shape of a plant?

2. Controllability

How can an artist generate a plant with a desired shape?

3. Evaluation

How can we say the model is real?

4. Reconstruction

How can we get a model from a real-world sample?



Q&A

Course material available at: http://goo.gl/PaJjy4