

Byungsoo Kim

CONTACT INFORMATION	ETH Zürich, CAB G 86.2 Universitätstrasse 6 8006 Zürich, Switzerland	kimby@inf.ethz.ch www.byungsoo.me
RESEARCH INTERESTS	Physics-based Simulation, Machine Learning and Geometry Processing	
EDUCATION	ETH Zürich , Switzerland	
	PhD Candidate in Computer Science	2017 - present
	<ul style="list-style-type: none">• Advisor: Prof. Dr. Markus Gross	
	MSc in Computer Science (Track in Visual Computing)	2016
	<ul style="list-style-type: none">• Thesis: <i>Learning Structured Representations for Geometry</i>• Advisor: Prof. Dr. Markus Gross	
	Korea Advanced Institute of Science and Technology (KAIST) , Korea	
	BSc in Computer Science	2009
WORK EXPERIENCE	<i>Software Intern</i> , NVIDIA/AGEIA Technologies , Switzerland www.nvidia.com	
	<ul style="list-style-type: none">• porting and validation of NVIDIA FleX SDK on various NVIDIA SHIELD devices• porting and validation of NVIDIA PhysX SDK on a new platform• Supervisor: Adam Moravanszky	2015
	<i>Research Assistant</i> , ETH Zürich, Computer Graphics Lab. , Switzerland graphics.ethz.ch	
	<ul style="list-style-type: none">• research and development of interactive 3D fluid simulation and rendering in mobile environment• Supervisor: Dr. Barbara Solenthaler	2014
	<i>Assistant Researcher</i> , Dongguk University, Visual Simulation Lab. , Korea simulation.dongguk.edu	
	<ul style="list-style-type: none">• research and development of high-performance 3D rendering techniques for 2D fluid simulation in mobile environment• developed various plugins and tools for VFX simulation software• Supervisor: Prof. Jeong-Mo Hong	2013-2014
	<i>Co-Founder</i> , TENELEVEN , Korea www.1011.co.kr	
	<ul style="list-style-type: none">• computer graphics tech startup• developed shaders and tools for mobile games Molly & Moe and WaterPang• research and development of various algorithms and visualization tools for Geographic Information System (GIS) software	2013
	<i>Research Engineer</i> , FXGear, Research & Development Team , Korea www.fxgear.net	
	<ul style="list-style-type: none">• developed architecture, GUI and various simulation tools for a scalable node-based 3D fluid simulation software FluX• developed various algorithms and shaders for real-time facial expression control in mobile environment• Supervisor: Dr. Kwang-Jin Choi	2010-2013

PUBLICATIONS

Byungsoo Kim, Oliver Wang, A. Cengiz Öztireli, Markus Gross, *Semantic Segmentation for Line Drawing Vectorization Using Neural Networks*, Computer Graphics Forum (Proceedings of Eurographics 2018), 37(2), 329-338, Apr. 2018.

Seung Man An, Ho-Young Lee, Byungsoo Kim, Chae-Yeon Yi, Jeong-Hee Eum and Jung-Hun Woo, *Geospatial Spreadsheets with Microscale Air Quality Visualization and Synchronization for Supporting Multiple-Scenario Visual Collaboration*, International Journal of Geographical Information Science, 28(12), 2511-2532, Dec. 2014.

Seung Man An, Byungsoo Kim, Ho-Young Lee, Chang-Hun Kim, Chae-Yeon Yi, Jeong-Hee Eum and Jung-Hun Woo, *Three-Dimensional Point Cloud based Sky View Factor Analysis in Complex Urban Settings*, International Journal of Climatology, 34(8), 2685-2701, Nov. 2013.

Byungsoo Kim, Ho-Young Lee and Chang-Hun Kim, *Visual Simulation of Vortex Particle using Adaptive Grid in High Vorticity Region*, Proceedings of Korea Computer Graphics Society Symposium, Jun. 2013.

Seung Man An, Jung-Hun Woo, Byungsoo Kim, Jeong-Mo Hong, So-Young Kim, Sun-Ho Choi, Youn-Ha Kim, Song-Hua Quan, *Development of Airborne LiDAR based Sky View Factors to Estimate Micro-scale Energy Budget of Forest Areas: a Case Study of Taehwa Forest, Korea*, AGU Fall Meeting Abstracts, Dec. 2012.

Kwang-Jin Choi, Kyung-Gun Na, Jong-Chul Yoon, Byungsoo Kim, Sehwi Park, Huicheol Hwang, Insang Yoon, *FluX - A Software Platform for Large-Scale Fluid Simulation*, Proceedings of Korea Computer Graphics Society Symposium, Jun. 2012.

Byungsoo Kim, Haebom Lee and Kee-Eung Kim, *Implementation and Performance Improvement of EKF-SLAM and TJTF-SLAM with Logs of Sensor Data Set taken from Real Robots*, Undergraduate Research Participation Program, KAIST, Dec. 2008.

Byungsoo Kim and Jaeseong Jeong, *Fractal Analysis Method applied to the Analysis of EEG Time Series for a Distinction between Patients with Alzheimer-Type Dementia and Late Life Depression*, Undergraduate Research Participation Program, KAIST, Jun. 2008.

THESIS

Byungsoo Kim, *Learning Structured Representations for Geometry*, Master Thesis, ETH Zürich, 2016.

HONORS & SCHOLARSHIP

Korean Government Scholarship
National Institute for International Education (NIIED) 2014-2016
Run by Korean Government

The Presidential Science Scholarship
Korea Student Aid Foundation (KOSAF) 2005-2008
Certified by President Roh, Moo-hyun

PATENTS

Apparatus and Method for Converting Geometric Coordinate
Application No.: 10-2012-0151780 (KR)

Calculating System for Open Area Ratio of the Sky using Aerial LIDAR Data
Application No.: 10-2012-0106628 (KR)

TEACHING
EXPERIENCE

Teaching Assistant, D-INFK, ETH Zürich
252-0546-00L Physically-Based Simulation in Computer Graphics

FS 2017

Teaching Assistant, D-MAVT, ETH Zürich
252-0832-00L Informatics

SS 2017,2018

Teaching Assistant, Department of Computer Science, KAIST
CS101 Introduction to Programming

Fall 2008