

Junho Jeon

PH.D. CANDIDATE

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Research Interests

3D reconstruction, deep learning, image processing, scene understanding.

Education & Career

POSTECH(Pohang University of Science and Technology)

Pohang, S.Korea

PH.D. (JOINT M.S & PH.D.) IN DEPT. OF COMPUTER SCIENCE AND ENGINEERING

Mar. 2012 - Present

- Advisor: Prof. Seungyong Lee

Microsoft Research Asia

Beijing, China

FULLTIME RESEARCH INTERN

Sept. 2012 - Feb. 2013

- Researched an intrinsic image decomposition algorithm from single RGB-D image
- Advisor: Dr. Xin Tong

POSTECH(Pohang University of Science and Technology)

Pohang, S.Korea

B.S. IN DEPT. OF COMPUTER SCIENCE AND ENGINEERING

Mar. 2008 - Feb. 2012

- Graduated with Cum laude (GPA 3.49)

Publications

International Conference & Journal

- Junho Jeon, Jinwoong Jung, Seungyong Lee, "Deep Upright Adjustment of 360 Panoramas using Multiple Roll Estimations," ACCV 2018.
- Junho Jeon, Jinwoong Jung, Jungeon Kim, Seungyong Lee, "Semantic Reconstruction: Reconstruction of Semantically Segmented 3D Meshes via Volumetric Semantic Fusion," Computer Graphics Forum (special issue on Pacific Graphics 2018), Vol. 37, No. 7, October 2018.
- Junho Jeon, Seungyong Lee, "Reconstruction-based Pairwise Depth Dataset for Depth Image Enhancement Using CNN," ECCV, 2018.
- Hyunjoon Lee, Junho Jeon, Junho Kim, Seungyong Lee, "Structure-Texture Decomposition of Images with Interval Gradient," Computer Graphics Forum, Vol. 36, No. 6, September 2017.
- Junho Jeon, Hyunjoon Lee, Henry Kang, Seungyong Lee, "Scale-aware Structure-Preserving Texture Filtering," Computer Graphics Forum (special issue on Pacific Graphics 2016), Vol. 35, No. 7, October 2016.
- Junho Jeon, Yeongyu Jung, Haejoon Kim, Seungyong Lee, "Texture Map Generation for 3D Reconstructed Scenes," Visual Computer (special issue on CGI 2016), Vol. 32, Issue 6, pp 955-965, June 2016.
- Junho Jeon, Sunghyun Cho, Xin Tong, Seungyong Lee, "Intrinsic Image Decomposition using Structure-Texture Separation and Surface Normals," ECCV, 2014.

International Workshop

- Junho Jeon, Seong-Jin Park, Hyeongseok Son, Seungyong Lee, "Computational Photography Software using Deep Learning: Perceptual Image Super-Resolution and Depth Image Refinement," ECCV Demo Session, 2018.
- Eunbin Hong, Junho Jeon, Seungyong Lee, "CNN based Repeated Cropping for Photo Composition Enhancement," CVPR Scene Understanding Workshop (SUNw), 2017.
- Junho Jeon, Hyunjoon Lee, Junho Kim, Henry Kang, Seungyong Lee, "Kernel Carving for Structure-Preserving Image Smoothing," International Workshop on Frontiers of Computer Vision (IW-FCV), 2017.
- Junho Jeon, Daehoon Yoo, Seungyong Lee, "Fast Indoor Structure Analysis of Single RGBD Images," CVPR Scene Understanding Workshop (SUNw), 2015.
- Junho Jeon, Daehoon Yoo, Chiyoung Lee, Hyunjoon Lee, Junho Kim, Seungyong Lee, "Kinect Reality: Real-time 3D Scanning Based Augmented Reality," ACCV, 2012 (Workshop on RGB-D Camera) (Best Kinect Application Award)

Research & Project Experience

Real-time 3D Reconstruction of Large-scale Environment Based on Hierarchical Structural Information

POSTECH

PROJECT SUPPORTED BY NATIONAL RESEARCH FOUNDATION OF KOREA (NRF)

Nov. 2014 - Dec. 2017

- Developed core techniques for a large-scale indoor scene reconstruction framework.
- An intermediate outcome is published to Visual Computer (special issue on CGI 2016).

Kinect Reality: Real-time 3D Scanning based Augmented Reality

POSTECH & MSRA

ICT/SW CREATIVE RESEARCH PROJECT WITH MSRA

Nov. 2011 - Jul. 2015

- Participated as a lead researcher.
- Developed various components of a RGB-D based 3D reconstruction framework.
- Kinect Reality: Real-time 3D Scanning Based Augmented Reality (2011-2012)
- Structural Information Analysis for 3D Scene Reconstruction (2012-2013)
- Interactive 3D Floor Plane Reconstruction from RGB-D Video (2013-2014)
- Hybrid Model Representation for Progressive Indoor Scene Reconstruction (2014-2015)
- Several workshop papers are published.

Kinect Graffiti: 3D Reconstruction and Drawing with Microsoft Kinect

POSTECH

UNDERGRADUATE RESEARCH PROJECT II

Sept. 2011 - Dec. 2011

- Implemented 3D reconstruction and drawing application using Microsoft Kinect for second undergraduate research project.
- Variant of volumetric representation is developed for real-time drawing on reconstructed scene.

Seamless Video Cloning using Mean-Value Coordinates

POSTECH

UNDERGRADUATE RESEARCH PROJECT I

Mar. 2011 - Jun. 2011

- Implemented seamless video cloning algorithm using mean-value coordinates for undergraduate research project.
- In this project, I used CUDA parallel implementation to accelerate computation for real-time performance

Honors & Awards

2016	Fellowship , Naver PhD Fellowship	<i>Naver Corp.</i>
2014	Fellowship , POSTECH-Qualcomm Fellowship	<i>Qualcomm</i>
2012	Best Kinect-Application Award , Asian Conference of Computer Vision 2012 Workshop	<i>Daejeon, S.Korea</i>
2012	Best Student Research Award , Undergraduate Research Project	<i>POSTECH</i>
2010	13th Place , ACM-ICPC Asia Daejeon Regional	<i>Daejeon, S.Korea</i>
2009	10th Place , ACM-ICPC Asia Seoul Regional	<i>Seoul, S.Korea</i>
2009	Prize for Rookie , 11th POSTECH Programming Contest	<i>POSTECH</i>