

# Minhyuk Sung

## Contact Information

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Website: <https://mhsung.github.io>

## Current Position

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Research Scientist

**Adobe Research**

San Jose, CA, USA

3D Machine Learning, Geometry Processing, Computer Graphics, Computer Vision.

## Education

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2013 - 2019	Ph.D. in Computer Science, <b>Stanford University</b> Stanford, CA, USA Dissertation: <b>Learning and exploring the compositional structure of 3D data</b> Advisor: Leonidas Guibas
2008 - 2010	Master of Science in Computer Science, <b>Korea Advanced Institute of Science and Technology (KAIST)</b> Daejeon, South Korea Thesis: <b>A Spectral Approach to Shape Matching Using a Heat Kernel Function</b> Advisor: Sung Yong Shin
2004 - 2008	Bachelor of Science in Computer Science, <b>Korea Advanced Institute of Science and Technology (KAIST)</b> Daejeon, South Korea <i>Top Rank</i> in Computer Science Department

## Prior Experience

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Research Intern <b>Autodesk Research</b> , San Francisco, CA, USA	Jun 2017 - Sep 2017
Research Intern <b>Adobe Research</b> , Seattle, WA, USA	Jun 2016 - Sep 2016
Research Intern <b>Google</b> , Mountain View, CA, USA	Jun 2015 - Sep 2015
Research Intern <b>Google</b> , Mountain View, CA, USA	Jun 2014 - Sep 2014
Researcher Imaging Media Research Center (IMRC) <b>Korea Institute of Science and Technology (KIST)</b> , Seoul, South Korea	Mar 2010 - Jul 2013

## Publications

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1. **DeformSyncNet: Deformation Transfer via Synchronized Shape Deformation Spaces**  
Minhyuk Sung\*, Zhenyu Jiang\*, Panos Achlioptas, Niloy J. Mitra, Leonidas J. Guibas  
(\* Equal contribution)  
SIGGRAPH Asia 2020 (To appear)
2. **Deformation-Aware 3D Shape Embedding and Retrieval**  
Mikaela Angelina Uy, Jingwei Huang, Minhyuk Sung, Tolga Birdal, Leonidas Guibas  
ECCV 2020
3. **Neural Geometric Parser for Single Image Camera Calibration**  
Jinwoo Lee, Minhyuk Sung, Hyunjoon Lee, Junho Kim  
ECCV 2020
4. **Pix2Surf: Learning Parametric 3D Surface Models of Objects from Images**  
Jiahui Lei, Srinath Sridhar, Paul Guerrero, Minhyuk Sung, Niloy Mitra, Leonidas Guibas  
ECCV 2020
5. **Learning 3D Part Assembly from a Single Image**  
Yichen Li\*, Kaichun Mo\*, Lin Shao, Minhyuk Sung, Leonidas Guibas  
(\* Equal contribution)  
ECCV 2020
6. **Supervised Fitting of Geometric Primitives to 3D Point Clouds**  
Lingxiao Li\*, Minhyuk Sung\*, Anastasia Dubrovina, Li Yi, and Leonidas Guibas  
(\* Equal contribution)  
CVPR 2019 (Oral)
7. **GSPN: Generative Shape Proposal Network for 3D Instance Segmentation in Point Cloud**  
Li Yi, Wang Zhao, He Wang, Minhyuk Sung, and Leonidas Guibas  
CVPR 2019
8. **Deep Functional Dictionaries: Learning Consistent Semantic Structures on 3D Models from Functions**  
Minhyuk Sung, Hao Su, Ronald Yu, and Leonidas Guibas  
NeurIPS 2018
9. **Learning Fuzzy Set Representations of Partial Shapes on Dual Embedding Spaces**  
Minhyuk Sung, Anastasia Dubrovina, Vladimir G. Kim, and Leonidas Guibas  
SGP 2018 (Symposium on Geometry Processing)
10. **ComplementMe: Weakly-Supervised Component Suggestions for 3D Modeling**  
Minhyuk Sung, Hao Su, Vladimir G. Kim, Siddhartha Chaudhuri, and Leonidas Guibas  
SIGGRAPH Asia 2017  
Featured in an ACM SIGGRAPH press release: [\[Link 1\]](#) [\[Link 2\]](#)
11. **Data-Driven Structural Priors for Shape Completion**  
Minhyuk Sung, Vladimir G. Kim, Roland Angst, and Leonidas Guibas

SIGGRAPH Asia 2015

12. **Image Unprojection for 3D Surface Reconstruction: A Triangulation-based Approach**  
Min-Hyuk Sung, Hwasup Lim, Hyoung-Gon Kim, and Sang Chul Ahn  
IEEE International Conference on Image Processing (ICIP) 2013
13. **Finding the M-best Consistent Correspondences between 3D Symmetric Objects**  
Min-Hyuk Sung and Junho Kim  
Computers & Graphics, Feb.-Apr. 2013.
14. **A Triangulation-Invariant Method for Anisotropic Geodesic Map Computation on Surface Meshes**  
Sang Wook Yoo, Joon-Kyung Seong, Min-Hyuk Sung, Sung Yong Shin and Elaine Cohen  
IEEE Transactions on Visualization and Computer Graphics (TVCG), Oct. 2012.

## Honors, Invited Talks, and Scholarships

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| 2019      | Doctoral Consortium<br>ICCV 2019  |
| 2019      | Doctoral Consortium<br>SIGGRAPH 2019  |
| 2013      | Doctoral Study Abroad Scholarship Recipient Honors<br>Korea Foundation for Advanced Studies (KFAS)                              |
| 2008-2010 | National Science and Engineering Graduate Research Scholarship<br>(S2-2008-000-00006-2)<br>Korea Student Aid Foundation (KOSAF) |
| 2004-2008 | National Science and Engineering Scholarship<br>Korea Student Aid Foundation (KOSAF)  |
| 2005-2008 | Merit-based Scholarship<br>Korea Advanced Institute of Science and Technology (KAIST)   |

## Teaching Experience

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| 2018 Spring | Guest Lecturer<br>CS233 Geometric and Topological Data Analysis, Stanford   |
| 2016 Fall   | Course Assistance<br>CS268 Geometric Algorithms, Stanford                   |
| 2015 Fall   | Course Assistance<br>CS348A Computer Graphics: Geometric Modeling, Stanford |
| 2009 Spring | Teaching Assistance<br>CS202 Problem Solving, KAIST                         |

## Academic Activities

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Reviewer SIGGRAPH, SIGGRAPH Asia, Eurographics, Pacific Graphics,  
NeurIPS, ICLR, 3DV, WACV, ACCV,  
ACM TOG, IEEE TVCG, CGF, TVC, C&G,  
IEEE TPAMI, IEEE RA-L.

## References

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<b>Leonidas Guibas</b>	Professor, Stanford University	guibas@cs.stanford.edu
<b>Vladimir Kim</b>	Senior Research Scientist, Adobe Research	vokim@adobe.com
<b>Siddhartha Chaudhuri</b>	Assistant Professor, IIT Bombay	sidch@cse.iitb.ac.in
	Senior Research Scientist, Adobe Research	sidch@adobe.com
<b>Hao (Richard) Zhang</b>	Professor, Simon Fraser University	haoz@cs.sfu.ca