

# Luca Morreale



@LucaMorreale\_



Linkedin



Google scholar



Github






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<https://luca-morreale.github.io/>



## Education

- 2019 – 2024     **Ph.D., University College London** Computer science  
Thesis title: *Neural Surfaces*  
Advisor: Niloy J. Mitra.
- 2015 – 2017     **M.Sc., Politecnico di Milano** in Computer Science and Engineering.
- 2012 – 2015     **B.Sc., Politecnico di Milano** in Computer Science and Engineering.

## Experience

- 2023     **Meta Reality Labs**, Research intern  
Scene geometry manipulation through natural language (LLMs) and user eye-gaze, supervised by Vasileios Balntas.
- 2021     **Adobe Research**, Research intern  
Shape compression, deformation, and editing through convolutional representation under the supervision of Paul Guerrero.
- 2019     **Università della Svizzera Italiana**, Research Assistant  
Point cloud convolution for classification and correspondence under the supervision of Michael Bronstein.
- 2018 – 2019     **Politecnico di Milano**, Research Assistant  
Real-time point cloud semantic simplification for 3D scene reconstruction under the supervision of Matteo Matteucci.

## Research Publications

- **Neural Semantic Surface Maps**  
L. Morreale, N. Aigerman, V. G. Kim, and N. J. Mitra  
Computer Graphics Forum Wiley Online Library 2024.
- **Euclid: Interactive Editing of Scene Geometry with Natural Language**  
L. Morreale, C. Xie, A. Avetisyan, *et al.*  
Under review at ICML 2024.
- **Neural convolutional surfaces**  
L. Morreale, N. Aigerman, P. Guerrero, V. G. Kim, and N. J. Mitra  
Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition 2022.
- **Neural surface maps**  
L. Morreale, N. Aigerman, V. G. Kim, and N. J. Mitra  
Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition 2021.
- **Dense 3D visual mapping via semantic simplification**  
L. Morreale, A. Romanoni, and M. Matteucci


International Conference on Robotics and Automation (ICRA) IEEE 2019.

- **Predicting the next best view for 3d mesh refinement**  
L. Morreale, A. Romanoni, and M. Matteucci  
Intelligent Autonomous Systems 15: Proceedings of the 15th International Conference IAS-15 Springer 2019.
- **Learning and mining player motion profiles in physically interactive robogames**  
E. L. Oliveira, D. Orrù, L. Morreale, T. P. Nascimento, and A. Bonarini  
Future Internet MDPI 2018.

## Patents

- **Neural network based 3D object surface mapping**  
V. Kim, N. Aigerman, N. J. Mitra, and L. Morreale US Patent 11,869,132 Jan. 2024.




## Awards

- 2022     **Rabin Ezra scholarship**  
The Rabin Ezra Scholarship Trust has been set up to make available bursaries for post-graduate students specializing in computer graphics.



## Service

-  Reviewer for CVPR, NeurIPS, ICML

## Teaching

- 2022     **Acquisition and Processing of 3D Geometry**, University College London
- 2020 – 2022     **Machine Learning for Visual Computing**, University College London
- 2018 – 2019     **Computer Science 101**, Politecnico di Milano

## Skills

- Languages     English, Italian.
- Coding     Python, Pytorch, C, C++,  $\LaTeX$