



## PAPERS

1. *Text-guided Controllable Mesh Refinement for Interactive 3D Modeling*. Yun-Chun Chen, Selena Ling Ling, Zhiqin Chen, Vova Kim, **Matheus Gadelha**, Alec Jacobson. ACM SIGGRAPH Asia, 2024
2. *DMesh: A Differentiable Representation for General Meshes*. Sanghyun Son, **Matheus Gadelha**, Yang Zhou, Zexiang Xu, Ming C. Lin, Yi Zhou. NeurIPS, 2024
3. *GEM3D: Generative Medial Abstractions for 3D Shape Synthesis*. Dmitry Petrov, Pradyumn Goyal, Vikas Thamizharasan, Vova Kim, **Matheus Gadelha**, Melinos Averkiou, Siddhartha Chaudhuri, Evangelos Kalogerakis. ACM SIGGRAPH, 2024
4. *Learning Continuous 3D Words for Text-to-Image Generation*. Ta-Ying Cheng, **Matheus Gadelha**, Thibault Groueix, Matthew Fisher, Radomir Mech, Andrew Markham, Niki Trigoni. Computer Vision and Pattern Recognition (CVPR), 2024
5. *Generative Rendering: Controllable 4D-Guided Video Generation with 2D Diffusion Models*. Shengqu Cai, Duygu Ceylan, **Matheus Gadelha**, Chun-Hao Huang, Tuanfeng Y. Wang, Gordon Wetzstein. Computer Vision and Pattern Recognition (CVPR), 2024
6. *Diffusion Handles: Enabling 3D Edits for Diffusion Models by Lifting Activations to 3D*. Karran Pandey, Paul Guerrero, **Matheus Gadelha**, Yannick Hold-Geoffroy, Karan Singh, Niloy Mitra. Computer Vision and Pattern Recognition (CVPR), 2024
7. *3DMiner: Discovering Shapes from Large-Scale Unannotated Image Datasets*. Ta-Ying Cheng, **Matheus Gadelha**, Soren Pirk, Thibault Groueix, Radomir Mech, Andrew Markham, Niki Trigoni. International Conference on Computer Vision (ICCV), 2023.
8. *ANISE: Assembly-based Neural Implicit Surface rEconstruction*. Dmitry Petrov, **Matheus Gadelha**, Radomir Mech, Evangelos Kalogerakis. Transactions on Visualization and Computer Graphics (TVCG), 2023.
9. *Recovering Detail in 3D Shapes Using Disparity Maps*. Marissa Ramirez de Chanlatte, **Matheus Gadelha**, Thibault Groueix, Radomir Mech. European Conference on Computer Vision (ECCV) Workshop - Learning to Generate 3D Shapes and Scenes, 2022.
10. *PrimFit: Learning to Fit Primitives Improves Few Shot Learning on Point Clouds*. Gopal Sharma, Bidya Dash, **Matheus Gadelha**, Aruni RoyChowdhury, Marios Loizou, Evangelos Kalogerakis, Liangliang Cao, Erik Learned-Miller, Rui Wang and Subhransu Maji. Symposium on Geometry Processing (SGP), 2022
11. *PlanarRecon: Real-time 3D Plane Detection and Reconstruction from Posed-Monocular Videos*. Yiming Xie, **Matheus Gadelha**, Fengting Yang, Xiaowei Zhou, Huaizu Jiang. Computer Vision and Pattern Recognition (CVPR), 2022
12. *Trace Match & Merge: Long-Term Field-Of-View Prediction for AR Applications*. Adam Viola\*, Sahil Sharma\*, Pankaj Bishnoi\*, **Matheus Gadelha**, Stefano Petrangeli, Haoliang Wang, Viswanathan Swaminathan. **Best paper candidate**. IEEE AIVR, 2021.
13. *Deep Manifold Prior*. **Matheus Gadelha**, Rui Wang, Subhransu Maji. **Best poster honorable mention at NECV**. arXiv: 2004.04242.
14. *Label-Efficient Learning on Point Clouds using Approximate Convex Decompositions*. **Matheus Gadelha\***, Aruni RoyChowdhury\*, Gopal Sharma, Evangelos

- Kalogerakis, Liangliang Cao, Erik Learned-Miller, Rui Wang, Subhransu Maji. European Conference on Computer Vision (ECCV), 2020.
15. *Learning Generative Models of Shape Handles*. **Matheus Gadelha**, Giorgio Gori, Duygu Ceylan, Radomir Mech, Nathan Carr, Tamy Boubekeur, Subhransu Maji, Rui Wang. Computer Vision and Pattern Recognition (CVPR) 2020.
  16. *Inferring 3D Shapes from Image Collections using Adversarial Networks*. **Matheus Gadelha**, Aartika Rai, Subhransu Maji, Rui Wang. International Journal of Computer Vision (IJCV).
  17. *Shape Reconstruction using Differentiable Projections and Deep Priors*. **Matheus Gadelha**, Rui Wang, Subhransu Maji. International Conference on Computer Vision (ICCV), 2019.
  18. *A Bayesian Perspective on the Deep ImagePrior*. Zezhou Cheng, **Matheus Gadelha**, Daniel Sheldon, Subhransu Maji. **Best poster at NECV**. Computer Vision and Pattern Recognition (CVPR), 2019.
  19. *Multiresolution Tree Networks for 3D Point Cloud Processing*. **Matheus Gadelha**, Rui Wang, Subhransu Maji. European Conference on Computer Vision (ECCV), 2018.
  20. *A Deeper Look at 3D Shape Classifiers*. Jong Chyi-Su **Matheus Gadelha**, Rui Wang, Subhransu Maji. Second Workshop on 3D Reconstruction Meets Semantics (ECCV), 2018.
  21. *Unsupervised 3D Shape Induction from 2D Views of Multiple Objects*. **Matheus Gadelha**, Subhransu Maji, Rui Wang. International Conference on 3D Vision (3DV), 2017.
  22. *3D Shape Reconstruction from Sketches via Multi-view Convolutional Networks*. Zhaoliang Lun, **Matheus Gadelha**, Evangelos Kalogerakis, Subhransu Maji, Rui Wang. International Conference on 3D Vision (3DV - Oral), 2017.
  23. *Shape Generation using Spatially Partitioned Point Clouds*. **Matheus Gadelha**, Subhransu Maji, Rui Wang. 28th British Machine Vision Conference (BMVC), London, Great Britain, 2017.
  24. *DRINK: Discrete Robust INvariant Keypoints*. **Matheus Gadelha**, Bruno Motta. International Conference on Pattern Recognition (ICPR), 2014.

## SERVICE

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 Area Chair at WACV 2024, 2025  
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 Reviewer for CVPR 2018, 2019, 2020, 2021, 2022, 2023, 2024  
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 Reviewer for SIGGRAPH Asia 2018, 2022  
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Graduate Student Representative at CICS – UMass Amherst, 2019-2020