Matheus Gadelha

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EDUCATION

University of Massachusetts - Amherst, Amherst, MA
Ph.D., Computer Science, 2015 - 2021

Federal University of Rio Grande do Norte, Natal, RN, Brazil
B.Sc., *M.Sc.* Computer Science, 2008 - 2014

RESEARCH EXPERIENCE

Adobe Research
Research Scientist, 2021 - present.

Google Perception
working with Abhijit Kundu and Thomas Funkhouser.
Research Intern and Student Researcher, Summer 2020 - Spring 2021

Adobe Research
working with Giorgio Gori, Duygu Ceylan, Radomir Mech, Nathan Carr and Tamy Boubekeur.
Research Scientist Intern, Summer 2019

Amazon Web Services
working with Tal Hassner.
Applied Scientist Intern, Summer 2018

CICS, University of Massachusetts - Amherst
Research Assistant, Fall 2015 - Present
Deep Learning for 3D Computer Vision.

DIMAp, Federal University of Rio Grande do Norte
Research Assistant, 2012 - 2014
Keypoint descriptors; realistic augmented reality

TEACHING EXPERIENCE

Teaching Assistant University of Massachusetts Amherst
Amherst, MA
Spring 2018 - Undergraduate Computer Vision
Fall 2018 - Graduate Computer Vision
Spring 2019 - Introduction to Computer Graphics

Temporary Lecturer Federal University of Rio Grande do Norte
Natal, RN, Brazil 2014 - 2015
Introduction to Algorithms and Numerical Analysis

PAPERS

Gopal Sharma, Bidya Dash, **Matheus Gadelha**, Aruni RoyChowdhury, Marios Loizou, Evangelos Kalogerakis, Liangliang Cao, Erik Learned-Miller, Rui Wang and Subhransu Maji. *PrimFit: Learning to Fit Primitives Improves Few Shot Learning on Point Clouds*. Symposium on Geometry Processing (SGP), 2022

Yiming Xie, **Matheus Gadelha**, Fengting Yang, Xiaowei Zhou, Huaizu Jiang. *PlanarRecon: Real-time 3D Plane Detection and Reconstruction from Posed Monocular Videos*. Computer Vision and Pattern Recognition (CVPR), 2022

Adam Viola*, Sahil Sharma*,Pankaj Bishnoi*, **Matheus Gadelha**, Stefano Petrangeli, Haoliang Wang, Viswanathan Swaminathan. *Trace Match & Merge: Long-Term Field-Of-View Prediction for AR Applications*. **Best paper candidate**. IEEE AIVR, 2021.

Matheus Gadelha, Rui Wang, Subhransu Maji. *Deep Manifold Prior*. **Best poster honorable mention at NECV**. arXiv: 2004.04242.

Matheus Gadelha*, Aruni RoyChowdhury*, Gopal Sharma, Evangelos Kalogerakis, Liangliang Cao, Erik Learned-Miller, Rui Wang, Subhransu Maji. *Label-Efficient Learning on Point Clouds using Approximate Convex Decompositions*. European Conference on Computer Vision (ECCV), 2020.

Matheus Gadelha, Giorgio Gori, Duygu Ceylan, Radomir Mech, Nathan Carr, Tamy Boubekeur, Subhransu Maji, Rui Wang. *Learning Generative Models of Shape Handles*. Computer Vision and Pattern Recognition (CVPR) 2020.

Matheus Gadelha, Aartika Rai, Subhransu Maji, Rui Wang. *Inferring 3D Shapes from Image Collections using Adversarial Networks*. International Journal of Computer Vision (IJCV).

Matheus Gadelha, Rui Wang, Subhransu Maji. *Shape Reconstruction using Differentiable Projections and Deep Priors*. International Conference on Computer Vision (ICCV), 2019.

Zezhou Cheng, **Matheus Gadelha**, Daniel Sheldon, Subhransu Maji. *A Bayesian Perspective on the Deep ImagePrior*. **Best poster at NECV**. Computer Vision and Pattern Recognition (CVPR), 2019.

Matheus Gadelha, Rui Wang, Subhransu Maji. *Multiresolution Tree Networks for 3D Point Cloud Processing*. European Conference on Computer Vision (ECCV), 2018.

Jong Chyi-Su **Matheus Gadelha**, Rui Wang, Subhransu Maji. *A Deeper Look at 3D Shape Classifiers*. Second Workshop on 3D Reconstruction Meets Semantics (ECCV), 2018.

Matheus Gadelha, Subhransu Maji, Rui Wang. *Unsupervised 3D Shape Induction from 2D Views of Multiple Objects*. International Conference on 3D Vision (3DV), 2017.

Zhaoliang Lun, **Matheus Gadelha**, Evangelos Kalogerakis, Subhransu Maji, Rui Wang. *3D Shape Reconstruction from Sketches via Multi-view Convolutional Networks*. Interna-

tional Conference on 3D Vision (3DV - *Oral*), 2017.

Matheus Gadelha, Subhransu Maji, Rui Wang. *Shape Generation using Spatially Partitioned Point Clouds*. 28th British Machine Vision Conference (BMVC), London, Great Britain, 2017.

Matheus Gadelha, Bruno Motta. *DRINK: Discrete Robust INvariant Keypoints*. 22nd International Conference on Pattern Recognition (ICPR), Stockholm, Swedden, 2014.

REVIEWING

ICCV 2019, 2021
CVPR 2018, 2019, 2020, 2021, 2022, 2023
LatinX Workshop at CVPR, 2022
TPAMI 2018
ECCV 2018, 2020, 2022
Computer and Graphics Journal 2018
SIGGRAPH Asia 2018, 2022
Pacific Graphics 2019
Computer Graphics and Applications 2021, 2022

OTHER SERVICE

Graduate Student Representative (CICS – UMass Amherst) 2019-2020

TOOLS

Languages: Python, C, C++, Rust, JavaScript
Libraries: OpenGL, Tensorflow, PyTorch, OpenCV, Numpy, SkLearn
Applications: Vi/Vim, Git, Latex, Unity3D.

REFERENCES

Rui Wang, *Professor, University of Massachusetts Amherst*, ruiwang@cs.umass.edu
Subhransu Maji, *Professor, University of Massachusetts Amherst*, smaji@cs.umass.edu
Duygu Ceylan, *Senior Research Scientist, Adobe Research*, ceylan@adobe.com