

# SIDDHANT PRAKASH

siddhant.prakash@inria.fr  $\diamond$  <https://prakashsidd18.github.io/>

## EDUCATION

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- Doctor of Philosophy (Ph.D.) in Computer Science** November 2019 - Present  
INRIA, Sophia Antipolis - Méditerranée & Université Côte D'Azur, Nice, France  
Advisor: **Dr. George Drettakis**
- Master of Science (M.S.) in Computer Science** August 2016 - December 2018  
Arizona State University, Tempe, Arizona, USA  
CGPA: 4.00/4.00, Master's Opportunity for Research in Engineering (MORE) Scholar, Spring 2018.
- Bachelor of Technology (B.Tech.(Hons.)) in Computer Science and Engineering** August 2012 - May 2016  
International Institute of Information Technology, Hyderabad, India  
Dean's Merit List, Spring 2015

## PUBLICATIONS

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- **Prakash S.**, Leimkühler T., Rodriguez S., and Drettakis G. “*Hybrid Image-based Rendering for Free-view Synthesis.*” Proceedings of the ACM on Computer Graphics and Interactive Techniques, Volume 4, Number 1 - May 2021
- Rodriguez S., Leimkühler T., **Prakash S.**, Wyman C., Shirley P. and Drettakis G. “*Glossy Probe Reprojection for Interactive Global Illumination.*” ACM Transactions on Graphics (SIGGRAPH Asia Conference Proceedings), Volume 39, Number 6 - December 2020
- Rodriguez S., **Prakash S.**, Hedman P., and Drettakis G. “*Image-Based Rendering of Cars using Semantic Labels and Approximate Reflection Flow.*” Proceedings of the ACM on Computer Graphics and Interactive Techniques, Volume 3, Number 1 - May 2020
- **Prakash S.**, Bahremand A., Nguyen L. D., and LiKamWa R., “*GLEAM: An Illumination Estimation Framework for Real-time Photorealistic Augmented Reality on Mobile Devices.*” Proceedings of the 17th Annual International Conference on Mobile Systems, Applications, and Services (MobiSys '19). ACM, 2019. Oral and demo presentation. (**Best Demo Runner-up Award**)
- **Prakash S.** and LiKamWa R., “*Real-time Illumination Estimation Using Collaborative Photorealistic Rendering for Mobile Augmented Reality.*” Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications (HotMobile '18). ACM, 2018. Poster presentation. (**Best Poster Award**)

## RESEARCH EXPERIENCE

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- INRIA Centre de Sophia Antipolis - Méditerranée, Sophia Antipolis Cedex, France** Feb 2019 - Oct 2019  
*Research Engineer at GraphDeco Team under Prof. George Drettakis*
- Refactored a software framework used for image-based rendering algorithms with a C++ and OpenGL backend
  - Ported implementation of state-of-the-art IBR algorithms: *Buehler et al. 2001, Chaurasia et al. 2013, Hedman et al. 2018*, etc.
- Max-Planck Institute for Intelligent Systems, Tuebingen, Germany** Jun 2017 - Aug 2017  
*Research & Development Intern at Perceiving Systems Department under Prof. Michael Black*
- Explored deep learning libraries (Caffe2 & Torch) which support GPU acceleration on mobile and embedded environment
  - Developed an Android application for Dense Optical Flow Estimation on mobile phones using Caffe2 and optimization libraries

## SKILLS

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**Programming Languages** C/C++, Python, Matlab, GLSL  
**Libraries & Software** OpenGL, OpenCV, System for IBR, Colmap, PyTorch, Numpy, Unity 3D, Mitsuba renderer  
**Media Design/Editing Tools** Adobe {Photoshop, Illustrator, Lightroom, Premiere Pro}, ImageMagick

## TECHNICAL PROJECTS

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- Real-time Localization, Detection & Classification of Objects** January 2017 - April 2017  
*Perception in Robotics Course Project* Arizona State University
- Designed a pipeline to localize, detect and classify objects in real time using DCNNs and ROS compatible modules on various systems
  - Using the YOLO and YOLO-tiny framework, compared performance of models for autonomous driving in a simulated environment
- 3D Object Registration and Multi-Dimensional Scaling** October 2016 - November 2016  
*Advanced Computer Graphics Course Project* Arizona State University
- Implemented the Iterative Closest Point algorithm for shape registration and performed error analysis on various types of 3D object
  - Studied multi-dimensional scaling by implementing the LS-MDS SMACOF algorithm to represent 3D objects in lower dimensions