

Srinath Sridhar

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Education

- 2012–2016 **Ph.D. Computer Science**, *Max Planck Institute for Informatics and Saarland University*, Germany.
Dissertation: “Tracking Hands in Action for Gesture-based Computer Input.”
Advisors: Prof. Christian Theobalt, Prof. Antti Oulasvirta.
Committee: Prof. Bernt Schiele, Prof. Hao Li, Prof. Hans-Peter Seidel (Chair).
- 2010–2012 **M.S.E. Electrical Engineering: Systems**, *University of Michigan*, Ann Arbor, USA.
Major: Computer Vision, Minor: Computer Science.
- 2006–2010 **B.E. Geoinformatics**, *College of Engineering Guindy, Anna University*, Chennai, India.
Thesis: “Multiple View Reconstruction & Documentation of Architectural Scenes.”

Research Experience

- Jul 2017–now **Stanford University**, *Postdoctoral Researcher, Geometric Computing Group*, CA, USA.
Advisor: Prof. Leonidas Guibas.
- Jan–Jun 2017 **Max Planck Institute for Informatics**, *Postdoctoral Researcher*, Saarbrücken, Germany.
Advisor: Prof. Christian Theobalt.
- 2015–2016 **Microsoft Research Redmond**, *Research Intern, Interactive 3D Technologies Group*, WA, USA.
Mentor: Dr. Shahram Izadi.
- May–Dec 2011 **Honda Research Institute Inc.**, *Research Intern*, Mountain View, USA.
Mentor: Dr. Victor Ng-Thow-Hing.
- 2011–2012 **Laboratory for Interactive Visualization in Engineering**, *Student Researcher*, Ann Arbor, USA.
Advisor: Prof. Vineet Kamat.

Publications [Google Scholar](#) [Semantic Scholar](#)

The top conferences in computer vision are **CVPR**, **ICCV**, **ECCV** and **SIGGRAPH**, and in HCI are **CHI** and **UIST**.

Conference Papers (Peer-reviewed)

- [P.11] Dushyant Mehta, Oleksandr Sotnychenko, Franziska Mueller, Weipeng Xu, **Srinath Sridhar**, Gerard Pons-Moll, Christian Theobalt. *Single-Shot Multi-Person 3D Body Pose Estimation From Monocular RGB Input*. arXiv:1712.03453, 2017.
- [P.10] Franziska Mueller, Florian Bernard, Oleksandr Sotnychenko, Dushyant Mehta, **Srinath Sridhar**, Dan Casas, Christian Theobalt. *GANerated Hands for Real-time 3D Hand Tracking from Monocular RGB*. Conference on Computer Vision and Pattern Recognition (**CVPR**) 2018.
- [P.9] Franziska Mueller, Dushyant Mehta, Oleksandr Sotnychenko, **Srinath Sridhar**, Dan Casas, Christian Theobalt. *Real-time Hand Tracking under Occlusion from an Egocentric RGB-D Sensor*. International Conference on Computer Vision (**ICCV**) 2017.
- [P.8] Dushyant Mehta, **Srinath Sridhar**, Oleksandr Sotnychenko, Helge Rhodin, Mohammad Shafiei, Hans-Peter Seidel, Weipeng Xu, Dan Casas, Christian Theobalt. *VNect: Real-time 3D Human Pose Estimation with a Single RGB Camera*. ACM Transactions on Graphics (**SIGGRAPH**) 2017.

- [P.7] **Srinath Sridhar**, Anders Markussen, Antti Oulasvirta, Christian Theobalt, Sebastian Boring. *WatchSense: On- and Above-Skin Input Sensing through a Wearable Depth Sensor*. SIGCHI Conference on Human Factors in Computing Systems (**CHI**) 2017.
- [P.6] **Srinath Sridhar**, Franziska Mueller, Michael Zollhöfer, Dan Casas, Antti Oulasvirta, Christian Theobalt. *Real-time Joint Tracking of a Hand Manipulating an Object from RGB-D Input*. European Conference on Computer Vision (**ECCV**) 2016.
- [P.5] **Srinath Sridhar**, Franziska Mueller, Antti Oulasvirta, Christian Theobalt. *Fast and Robust Hand Tracking Using Detection-Guided Optimization*. Conference on Computer Vision and Pattern Recognition (**CVPR**) 2015.
- [P.4] **Srinath Sridhar**, Anna Maria Feit, Christian Theobalt, Antti Oulasvirta. *Investigating the Dexterity of Multi-Finger Input for Mid-Air Text Entry*. SIGCHI Conference on Human Factors in Computing Systems (**CHI**) 2015.
- [P.3] **Srinath Sridhar**, Helge Rhodin, Hans-Peter Seidel, Antti Oulasvirta, Christian Theobalt. *Real-time Hand Tracking Using a Sum of Anisotropic Gaussians Model*. International Conference on 3D Vision (**3DV**) 2014 (**oral presentation**).
- [P.2] **Srinath Sridhar**, Antti Oulasvirta, Christian Theobalt. *Interactive Markerless Articulated Hand Motion Tracking using RGB and Depth Data*. International Conference on Computer Vision (**ICCV**) 2013.
- [P.1] Victor Ng-Thow-Hing, Karlin Bark, Lee Beckwith, Cuong Tran, Rishabh Bhandari, **Srinath Sridhar**. *User-Centered Perspectives for Automotive Augmented Reality*. International Symposium on Mixed and Augmented Reality (**ISMAR**) 2013.

Workshop Papers, Posters and Technical Reports

- [R.5] **Srinath Sridhar**, Gilles Bailly, Elias Heydrich, Antti Oulasvirta, Christian Theobalt. *FullHand: Markerless Skeleton-based Tracking for Free-Hand Interaction*. MPI-I-2016-4-002. Saarbrücken: Max-Planck-Institut für Informatik 2016.
- [R.4] **Srinath Sridhar**, Antti Oulasvirta, Christian Theobalt. *Fast Tracking of Hand and Finger Articulations Using a Single Depth Camera*. MPI-I-2014-4-002. Saarbrücken: Max-Planck-Institut für Informatik 2014.
- [R.3] **Srinath Sridhar**. *HandSonor: A Customizable Vision-based Control Interface for Musical Expression*. SIGCHI Conference on Human Factors in Computing Systems (**CHI**) 2013.
- [R.2] **Srinath Sridhar**, Victor Ng-Thow-Hing. *Generation of Virtual Display Surfaces for In-vehicle Contextual Augmented Reality*. International Symposium on Mixed and Augmented Reality (**ISMAR**) 2012.
- [R.1] **Srinath Sridhar**, Vineet Kamat. *CAMFPLAN: A Real-time Markerless Camera Pose Estimation System for Augmented Reality*. UMCEE Report No. 11-01, Department of Civil and Environmental Engineering, University of Michigan, Ann Arbor 2012.

Patents

- 2015 Victor Ng-Thow-Hing, **Srinath Sridhar**. *Method to Generate Virtual Display Surfaces from Video Imagery of Road based Scenery*. U.S. Patent, US9135754 B2, 2015. Licensed by Honda Motor Co., Ltd.

Awards & Fellowships

- 2017 **Best Poster Award**, ICCV HANDS Workshop 2017.
- 2016 Selected to participate in the doctoral consortium and received a **travel grant for CVPR 2016**.
- 2013 **ACM Student Travel Grant** for CHI 2013.
- 2012–2016 **Max Planck Fellowship** for Ph.D. studies.
- 2011–2012 **Rackham International Student Fellowship**, University of Michigan, Ann Arbor.

- 2009 **Best Project Award**, *Single View Reconstruction of Buildings*, IIT Delhi.
- 2008 **CEG Alumni Association Travel Grant** for NASA Fundamental Aeronautics Conference.
- 2008 **Second Place, NASA Fundamental Aeronautics Student Contest**, USA.

Teaching Experience

- 2013–2016 **Course Assistant, Graduate Seminar on Computer Vision for Computer Graphics**, *Saarland University*.
Answered graduate student questions, provided feedback, and graded student work.

Invited Talks

- Oct 2017 **Meta Company**, *Understanding Humans in Action from Visual Data*, USA.
- May 2017 **CHI 2017**, *WatchSense: On- and Above-Skin Input Sensing through a Wearable Depth Sensor*, USA.
- Oct 2016 **Stanford University** and **University of Southern California**, *Tracking Hands in Action for Gesture-based Computer Input*, USA.
- Jul 2016 **Facebook**, *Capturing Hands in Action for Gesture-based Computer Input*, Seattle, USA.
- Apr 2015 **CHI 2015**, *Investigating the Dexterity of Multi-Finger Input for Mid-Air Text Entry*, South Korea.
- Apr 2015 **CHI 2015 Workshop**, *Towards Multi-Objective Optimization for UI Design*, South Korea.
- Dec 2014 **3DV 2014**, *Real-time Hand Tracking Using a Sum of Anisotropic Gaussians Model*, Japan.
- Jun 2013 **EIT ICT Smart Spaces Summer School**, *Tutorial on 3D Interaction Using Hand Motion Tracking*, Grenoble, France.

Service

- Program Committee Eurographics Short Papers (2018). Various workshops at CVPR (2015–2016, 2018) and ICCV (2017).
- Reviewer BMVC (2017), TPAMI (2017), CHI (2014–2018), UIST (2016), IMWUT/UbiComp (2017), SIGGRAPH Asia (2017), Eurographics (2017), CVIU (2015), 3DV (2015), FG (2017, 2018), IROS (2014–2016), Computer (2016), IEEE VR (2018).

Technical Skills

- Languages *Advanced*: C/C++, MATLAB, \LaTeX . *Beginner*: Python, CUDA-C, JavaScript
- Libraries Tensorflow, OpenCV, OpenGL, Qt, OpenMP, Eigen
- OS GNU/Linux (Debian, Ubuntu), Windows, and Android
- Software Tools Emacs, bash scripting, Git, Unity, GIMP, Adobe Premiere Pro, PowerPoint, Android Studio
- Hardware Depth sensors (Kinect, SoftKinetic, PMD, Intel), single-board computers (Beaglebone Black), quadcopters

Selected Press

- SR TV** “VNect”, Saarländischer Rundfunk (German State TV), June 21, 2017 ([online version](#)).
- SR TV** “WatchSense”, Saarländischer Rundfunk (German State TV), May 21, 2017 ([online version](#)).
- IEEE** “Control Your Smartwatch without Touching It”, Tony Pallone, IEEE Electronics 360, May 4, 2017 ([online version](#)).
- ECE News** “Student teams earn prizes in EECS 556: Image Processing”, Catharine June, Michigan EECS, April 29, 2011 ([online version](#)).

References

Available on request.