

Sanjeev J. Koppal

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- Objective* To work on cutting edge projects in computer vision and computer graphics
- Areas of Expertise* Computational sensors, Novel cameras and lighting, Physics-based vision, Digital cinematography, 3D cinema, Active illumination, Image-based rendering, Appearance modeling, 3D reconstruction
- Education*
- Carnegie Mellon University, Robotics Institute
PhD in **Robotics**, August 2009, GPA: 3.79
 - Carnegie Mellon University, Robotics Institute
Masters in **Robotics**, May 2006, GPA: 3.79
 - University of Southern California
Bachelors in **Computer Science**, May 2003, GPA: 3.93
- Skills*
- C/C++/VC++, Matlab, Mathematica, CorelDraw, Premiere, Windows, UNIX/Linux
- Refereed Conference Papers*
- Wide-angle Micro Sensors for Vision on a Tight Budget
Conference on Computer Vision and Pattern Recognition, 2011.
S. J. Koppal, I. Gkioulekas, G. Barrows and T. Zickler
(Oral Presentation, 4% acceptance rate)
 - Shadow cameras: Reciprocal views from illumination masks
International Conference on Computer Vision, 2009.
S. J. Koppal and S. G. Narasimhan
(Poster Presentation, 20% acceptance rate)
http://www.cs.cmu.edu/~ILIM/projects/IM/shadow_cameras.html
 - Temporal dithering of illumination for fast active vision
European Conference on Computer Vision, 2008.
S. G. Narasimhan, **S. J. Koppal** and S. Yamazaki
(Oral Presentation, 4% acceptance rate)
<http://www.cs.cmu.edu/~ILIM/projects/IL/dlp-dithering/>
 - Novel depth cues from uncalibrated near-field lighting
International Conference on Computer Vision, 2007.
S. J. Koppal and S. G. Narasimhan
(Poster Presentation, 20% acceptance rate)
http://www.cs.cmu.edu/~ILIM/projects/AA/depth_cues.html
 - Clustering appearance for scene analysis
Conference on Computer Vision and Pattern Recognition, 2006.
S. J. Koppal and S. G. Narasimhan
(Oral Presentation, 4% acceptance rate)
<http://www.cs.cmu.edu/~ILIM/projects/AA/clustering.html>

- Structured light from scattering media
International Conference on Computer Vision, 2005.
S. G. Narasimhan, S. K. Nayar, B. Sun and **S. J. Koppal**
(Oral Presentation, 4% acceptance rate)
[http : //www.cs.cmu.edu/ ~ ILIM/projects/LT/structured/structured.html](http://www.cs.cmu.edu/~ILIM/projects/LT/structured/structured.html)

Journals

- Appearance derivatives for iso-normal clustering of scenes
Transactions on Pattern Analysis and Machine Intelligence, 2008.
S. J. Koppal and S. G. Narasimhan
- A Viewer-Centric Editor for Stereoscopic Cinema
S. J. Koppal, L. Zitnick, M. Cohen, S. Kang, B. Ressler and A. Colburn
IEEE Computer Graphics and Applications, 2011

Workshop papers and Technical reports

- Illustrating motion through DLP Photography
PROCAMS 2009
S. J. Koppal and S. G. Narasimhan
- Taylor Series of Appearance Functions
CMU-Robotics Institute Technical report, 2006
S. J. Koppal, A. Datta, S. G. Narasimhan and K. Nishino

Work Experience

- Research Associate, (2009-present)
Harvard University
Mentor: Prof. Todd Zickler
- Graduate Research Assistant, (2003-2009)
Robotics Institute, Carnegie Mellon University
Advisor: Prof. Srinivasa Narasimhan
- Consultant, (October-November 2008)
Microsoft Research, Interactive Visual Media Group
Mentors: Dr. Sing Bing Kang, Dr. Larry Zitnick and Dr. Michael Cohen
 - Created a mathematical framework for a stereoscopic editing tool
 - Performed user studies to evaluate the tool
- Research Intern, (summer 2008)
Microsoft Research, Interactive Visual Media Group
Mentors: Dr. Sing Bing Kang, Dr. Larry Zitnick and Dr. Michael Cohen
 - Designed an interactive stereoscopic editing tool
 - Wrote preprocessing software to rectify and interlace stereoscopic content
- Software Design Engineer Intern, (summer 2002)
Microsoft Corporation
 - Created a log retrieval utility for SQL Server Storage Engine

