
EDUCATION	Columbia University 2013 – 2014 <i>Postdoctoral Fellow, Computer Science (advisor: Prof. Shree Nayar)</i>
	Dartmouth College 2007 – 2013 <i>Ph.D., Computer Science (advisor: Prof. Hany Farid)</i>
	Virginia Tech 2001 – 2003 <i>M.S., Computer Engineering (advisor: Prof. Lynn Abbott)</i>
	Virginia Tech 1996 – 2001 <i>B.S., Computer Engineering</i>
EMPLOYMENT	Uber Advanced Technologies Group 2016 – present <i>Research and development engineer</i> <ul style="list-style-type: none"> • Developing computer vision and machine learning algorithms for vehicle perception.
	Avametric, Physical Simulation (advisor: Prof. James O'Brien; Koshla) 2015 – 2016 <i>Research Scientist</i> <ul style="list-style-type: none"> • Optimized linear model for fitting human body models to point cloud data. • Derived and implemented numerical method for fitting models to body dimensions.
	Facebook, Computational Imaging Group 2014 – 2015 <i>Research Scientist</i> <ul style="list-style-type: none"> • Developed and numerically optimized Facebook Swipeable Filters. • Developed and trained photo clustering algorithm for Facebook Collages.
	Adobe, Creative Technologies Lab (CTL) Summer 2010 <i>Ph.D. Intern, Image Deblurring</i> <ul style="list-style-type: none"> • Designed model for spatially varying optical blur and camera calibration. • Published work in International Conference for Computational Photography.
	Johns Hopkins University, Applied Physics Laboratory (APL) 2004 – 2007 <i>Research Engineer, Image/Video Forensics</i> <ul style="list-style-type: none"> • Developed proof-of-concept image/video processing systems.
	Central Intelligence Agency, National Reconnaissance Office 2003 – 2004 <i>Project Management Engineer</i> <ul style="list-style-type: none"> • Guided contractors, and developed plans to mitigate engineering risks.
	IBM 1998 – 2000 <i>Computer Engineering Intern</i> <ul style="list-style-type: none"> • Developed BIOS code for Pentium machines. • Developed embedded microcode for Windows peripheral devices.
SKILLS AND SUBJECTS	C++, Python, Matlab, GIT. Background topics in: computer vision, image forensics, numerical optimization, computational imaging, machine learning, (some) geometry processing.
HONORS	Dartmouth Computer Science nominee, H. Croasdale Award, Academic Excellence 2013
	NSF Graduate Research Fellowship, Honorable Mention 2008
	Dartmouth College, Presidential Fellowship 2007
	Johns Hopkins University, APL, Supervisory Achievement Award, 2006–2007
	Central Intelligence Agency, National Reconnaissance Office, S. Team Award 2004

PUBLICATIONS

Eric Kee. Uniform Transformation of Non-Separable Probability Distributions, *Neural Information Processing Systems, NIPS*, (submitted 2015, in revision; ref. arXiv)

Tiago Carvalho, Hany Farid, **Eric Kee.** Exposing Photo Manipulation From User-Guided 3-D Lighting Analysis, *Proceedings SPIE, Media Watermarking, Security, and Forensics*, 2015.

Eric Kee, James O'Brien, and Hany. Farid. Exposing Photo Manipulation from Shading and Shadows. *ACM Transactions on Graphics*, 2014

Eric Kee, Photo Forensics from Partial Constraints. *PhD thesis, Dartmouth College*, 2013.

Eric Kee, James O'Brien, and Hany Farid. Exposing Photo Manipulation with Inconsistent Shadows. *ACM Transactions on Graphics*, Presented at SIGGRAPH 2013.

Eric Kee and Hany Farid. A Perceptual Metric for Photo Retouching. *Proceedings of the National Academy of Sciences*, 08(50): 19907-19912, 2011.

Eric Kee, Micah Kimo Johnson, and Hany Farid. Digital Image Authentication from JPEG Headers. *IEEE Transactions on Information Forensics and Security*, 6(3):1066-1075, 2011.

Eric Kee, Sylvain Paris, Simon Chen, and Jue Wang. Modeling and Removing Spatially-Varying Optical Blur. *IEEE International Conference on Computational Photography*, 2011.

Eric Kee and Hany Farid. Exposing Digital Forgeries from 3-D Lighting Environments. *IEEE International Workshop on Information Forensics and Security*, 2010.

Eric Kee and Hany Farid. Digital Image Authentication from Thumbnails. *SPIE Symposium on Electronic Imaging*, 2010.

Heather Wishart, **Eric Kee**, James Ford, John MacDonald, Sam Aney, and S. LoVerde. A Novel Approach for Semi-automated Segmentation of MS Lesions on FLAIR Imaging: Reliability and Clinical Correlates. *Annual Meeting of the International Neuropsychological Society*, 2010.

Eric Kee and Hany Farid. Detecting Photographic Composites of Famous People. TR2009-656, Department of Computer Science, Dartmouth College, 2009.

Eric Kee and Hany Farid. Printer Profiling for Forensics and Ballistics. *ACM Multimedia and Security Workshop*, 2008.

Eric Kee. and Sarah Airey. An adaptive genetic algorithm, *Proceedings of the Genetic and Evolutionary Computation Conference*, 2001.

PATENTS

Detecting image inconsistencies, 8,965,106, 2015

Perceptual Rating Of Digital Image Retouching 13,683,954, 2013

Lens Modeling 12/957,300, 2010

PRESS

Fancy Figuring Ferrets Out Fake Photos in **Scientific American**, 8.20.13

Software That Exposes Faked Photos in **New York Times**, 8.19.13

The Future of Graphics and Gaming in **MIT Technology Review** 7.29.13

Photo Retouching on **BBC World Service**, 12.20.11

New technology to catch Photoshop fakes in **NPR Marketplace** 12.19.11

Exposing Digitally Doctored Photos in **Boston Globe**, 12.5.11

Retouching Reality in **TIME Magazine**, 11.30.11

They Aren't That Thin - Digital Retouching Gets Graded in **NPR**, 11.30.11
The Secrets of Photoshop Unmasked in **The Independent**, 11.29.11
'Perfect' celebrity photos to get a reality check in **NBC Today**, 11.28.11
Image Tool Catches Fashion Industry Photo Alterations in **Wired**, 11.28.11
Photoshopped or Not? A Tool to Tell in **New York Times**, 11.28.11
Computer model spots image fraud in **Nature**, 11.28.11
Digital retouching: Physical Implausibility in **The Economist**, 11.28.11
Exposed: Software reveals how much photos have been retouched in **The Guardian**, 11.29.11
Altered-image ratings tell you just how fake photos are in **New Scientist**, 11.28.11
Retouched or not? Tool spots photos' too-flawless features in **CBS News** 11.28.11
Digital Photo Retouching Quantified in New Metric in **PCWorld**, 11.29.11

REVIEWER

ACM SIGGRAPH (2012-2015), EuroGraphics (2014), Transactions on Information Forensics and Security (2011-2015), Optics Express (2013-2015), European Signal Processing Conference (2012), European Transactions on Telecommunications (2011), International Journal of Document Analysis and Recognition (2010)