

APPOINTMENTS	<p>University of California, Berkeley <i>Professor, Electrical Engineering and Computer Science (50%)</i> <i>Professor, School of Information (50%)</i> <i>Member, Berkeley Artificial Intelligence Lab</i> <i>Member, Center for Innovation in Vision and Optics</i> <i>Member, Vision Science Program</i></p> <p>Dartmouth College, Department of Computer Science <i>Adjunct Professor</i></p> <p>Dartmouth College, Department of Computer Science <i>Albert Bradley 1915 Third Century Professor</i> <i>Professor</i> <i>William H. Neukom 1964 Distinguished Professor of Computational Science</i> <i>David T. McLaughlin Distinguished Professor of Computer Science</i> <i>Professor</i> <i>Associate Professor</i> <i>Assistant Professor</i></p> <p>Dartmouth College, Tuck School of Business <i>Adjunct Professor of Business Administration</i></p> <p>Dartmouth College, Neukom Institute for Computational Science <i>Director</i></p>	<p>2019 (as of July 1) –</p> <p>2019 – present</p> <p>1999 – 2019 2016 – 2019 2011 – 2016 2008 – 2011 2007 – 2008 2006 – 2007 2004 – 2006 1999 – 2004</p> <p>2016 – 2019</p> <p>2008 – 2011</p>
PROFESSIONAL	<p>AI Foundation <i>Board of Directors & Global AI Council</i></p> <p>Counter Extremism Project <i>Senior Advisor</i></p> <p>Human Rights Center, University of California, Berkeley, School of Law <i>Advisory Board</i></p> <p>Office of the Prosecutor, International Criminal Court <i>Technology Advisory Board</i></p> <p>Truepic, Inc. <i>Senior Advisor & Board of Advisors</i></p> <p>Fourandsix Technologies, Inc. <i>Chief Technology Officer & Co-founder</i></p>	<p>2019 – present</p> <p>2016 – present</p> <p>2019 – present</p> <p>2018 – present</p> <p>2018 – present</p> <p>2011 – 2018</p>
EDUCATION	<p>Massachusetts Institute of Technology <i>Postdoctoral Fellow, Brain and Cognitive Sciences (advisor: Ted Adelson)</i></p> <p>University of Pennsylvania <i>Ph.D., Computer Science (advisor: Eero Simoncelli)</i></p> <p>State University of New York at Albany <i>M.S., Computer Science</i></p> <p>University of Rochester <i>B.S., Computer Science with Applied Mathematics</i></p>	<p>1997 – 1999</p> <p>1993 – 1997</p> <p>1990 – 1992</p> <p>1984 – 1988</p>
AWARDS	<p>National Academy of Inventors (NAI), Fellow, 2016 John Simon Guggenheim Fellowship, 2006 Alfred P. Sloan Fellowship, 2002</p>	
FUNDING	<p>Facebook. <i>Multimedia Tamper Detection</i>, (1.2M), 2019 Google. <i>Exploiting Physiological Signals to Expose AI-Generated Fake Videos</i>, (50K), Co-PI, 2019 DARPA. <i>Photons, Pixels, Photoshop and the Internet</i>, (929K), Co-PI, 2016 National Institute of Justice. <i>Degrade It</i>, (124K), 2016 Microsoft Corp. <i>Combating On-line Extremism</i>, 2016 NVIDIA Corp. <i>How Realistic is Photorealistic?</i>, (Equipment Grant), 2015 National Science Foundation. <i>GridIron</i> (474K), Co-PI, 2012 National Science Foundation. <i>Instrument Development for Biological Research</i> (212K), Co-PI, 2008 National Science Foundation. <i>Digital Imaging Laboratory at Dartmouth</i> (427K), 2007 Department of Homeland Security. <i>Digital Video Forensics</i> (255K), 2007 Howard Hughes Medical Institute. <i>Undergraduate Science Education</i> (1.5M), Co-PI, 2006</p>	

United States Air Force. *Digital Image Forensics* (380K), 2006
 National Science Foundation. *The Evolution of Mate Choice in Damselflies* (535K), Co-PI, 2005
 Bureau of Justice Assistance. *Digital Image Forensics* (125K), 2005
 Microsoft Corp. (375K), 2005, 2006, 2007, 2009, 2016
 Adobe Systems, Inc. (110K), 2004, 2006, 2008
 National Institute of Justice. *Digital Tampering and Secrets* (690K), 2003
 National Institute of Justice. *Detecting Digital Tampering* (250K), 2000
 National Science Foundation. *CAREER: Mixing and Separating Digital Images* (315K), 2000

PUBLICATIONS (IMPACT) h -index=60; total citations=15,273; i500-index=6; i250-index=18; i100-index=42; i10-index=106.¹

PUBLICATIONS (BOOK) H. Farid. *Fake Photos*, MIT Press, Essential Knowledge Series, 2019.

H. Farid. *Photo Forensics*, MIT Press, 2016.

PUBLICATIONS (JOURNAL) S.J. Nightingale, K.A. Wade, H. Farid, and D.G. Watson. Can People Detect Errors in Shadows and Reflections? *Attention, Perception, & Psychophysics*, 2019 (in press).

H. Farid. Image Forensics. *Annual Review of Vision Science*, 2019. (in press)

H. Farid. Reining in Online Abuses. *Technology and Innovation*, 19(3):593-599, 2018.

J. Dressel and H. Farid. The Accuracy, Fairness, and Limits of Predicting Recidivism, *Science Advances*, 4(1):eaao5580, 2018.

B. Mader, M.S. Banks, and H. Farid. Identifying Computer-Generated Portraits: The Importance of Training and Incentives. *Perception*, 46(9):1062-1076, 2017.

K. Greenham, P. Lou, J.R. Puzey, G. Kumar, C. Arnevik, H. Farid, J. H. Willis, and C.R McClung. Geographic Variation of Plant Circadian Clock Function in Natural and Agricultural Settings. *Journal of Biological Rhythms*, 32(1):26-34, 2016.

M.J. Bravo and H. Farid. Observers Change their Target Template Based on Expected Context. *Attention, Perception, & Psychophysics*, 78(3):829-837, 2016.

O. Holmes, M.S. Banks, and H. Farid. Assessing and Improving the Identification of Computer Generated Portraits. *ACM Transactions on Applied Perception*, 13(2):7:1-7:12, 2016.

E.A. Cooper and H. Farid. Does the Sun Revolve Around the Earth? A Comparison between the General Public and On-line Survey Respondents in Basic Scientific Knowledge. *Public Understanding of Science*, 25(2):146-153, 2016.

S. Pittala, E. Whiting, and H. Farid. A 3-D Stability Analysis of Lee Harvey Oswald in the Backyard Photo. *Journal of Digital Forensics, Security and Law*, 10(3):87-98, 2015.

K. Greenham, P. Lou, S. E. Remsen, H. Farid, and C.R McClung. TRiP: Tracking Rhythms in Plants, an automated leaf movement analysis program for circadian period estimation. *Plant Methods*, 11(33):1-11, 2015.

E. Kee, J. O'Brien, and H. Farid. Exposing Photo Manipulation from Shading and Shadows. *ACM Transactions on Graphics*, 33(5):165:1-165:21, 2014.

M. Bravo and H. Farid. Informative Cues Can Slow Search: The cost of matching a specific template. *Perception*, 76(1):32-39, 2014.

¹ h -index = largest number h such that h publications have at least h citations; iN -index = number of publications with at least N citations. Citation counts according to GoogleScholar as of September 2019.

- E. Kee, J. O'Brien, and H. Farid. Exposing Photo Manipulation with Inconsistent Shadows. *ACM Transactions on Graphics*, 32(4):28:1-12, 2013 (presented at SIGGRAPH).
- D.T. Bolger, T.A. Morrison, B. Vance, D. Lee, and H. Farid. A Computer-Assisted System for Photographic Mark-Recapture Analysis. *Methods in Ecology and Evolution*, 3(5):813-822, 2012.
- J. O'Brien and H. Farid. Exposing Photo Manipulation with Inconsistent Reflections. *ACM Transactions on Graphics*, 31(1):4:1-4:11, 2012 (presented at SIGGRAPH).
- H. Farid and M.J. Bravo. Perceptual Discrimination of Computer Generated and Photographic Faces. *Digital Investigation*, 8:226-235, 2012.
- M.J. Bravo and H. Farid. Task Demands Determine the Specificity of the Search Template. *Attention, Perception, & Psychophysics*, 74(1):124-131, 2012.
- V. Conotter, J. O'Brien, and H. Farid. Exposing Digital Forgeries in Ballistic Motion. *IEEE Transactions on Information Forensics and Security*, 7(1):283-296, 2012.
- E. Kee and H. Farid. A Perceptual Metric for Photo Retouching. *Proceedings of the National Academy of Sciences*, 108(50):19907-19912, 2011.
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- H. Farid. The Lee Harvey Oswald Backyard Photos: Real or Fake? *Perception*, 38(11):1731-1734, 2009.
- H. Farid. A Survey of Image Forgery Detection. *IEEE Signal Processing Magazine*, 26(2):16-25, 2009.
- L. Shen, H. Farid and M.A. McPeck. Modeling 3-Dimensional Morphological Structures using Spherical Harmonics. *Evolution*, 63(4):1003-1016, 2009.
- H. Farid. Exposing Digital Forgeries from JPEG Ghosts. *IEEE Transactions on Information Forensics and Security*, 4(1):154-160, 2009.
- M.J. Bravo and H. Farid. The Specificity of the Search Template. *Journal of Vision*, 9(1):34, 1-9, 2009.
- M.A. McPeck, L. Shen and H. Farid. The Correlated Evolution of 3-Dimensional Reproductive Structure Between Male and Female Damselies. *Evolution*, 63(1):73-83, 2009.
- M.A. McPeck, L. Shen, J.Z. Torrey and H. Farid. The Tempo and Mode of 3-Dimensional Morphological Evolution in Male Reproductive Structures. *American Naturalist*, 171(5):E158-E178, 2008.
- M.J. Bravo and H. Farid. A Scale Invariant Measure of Image Clutter. *Journal of Vision*, 8(1):1-9, 2008.
- M.K. Johnson and H. Farid. Exposing Digital Forgeries in Complex Lighting Environments. *IEEE Transactions on Information Forensics and Security*, 2(3):450-461, 2007.
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- M.J. Bravo and H. Farid. Object Recognition in Clutter. *Perception & Psychophysics*, 68(6):911-918,

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D. Rockmore, S. Lyu and H. Farid. A Digital Technique for Authentication in the Visual Arts. *International Foundation for Art Research*, (8)2:12-23, 2006.

S. Lyu and H. Farid. Steganalysis Using Higher-Order Image Statistics. *IEEE Transactions on Information Forensics and Security*, (1)1:111-119, 2006. [IEEE SPS Best Paper Award, 2010]

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H. Sun, K.E. Lunn, H. Farid, Z. Wu, D.W. Roberts, A. Hartov and K.D. Paulsen. Stereopsis-Guided Brain Shift Compensation. *IEEE Transactions on Medical Imaging*, 24(8):1039-1052, 2005.

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S. Periaswamy and H. Farid. Elastic Registration in the Presence of Intensity Variations. *IEEE Transactions on Medical Imaging*, 22(7):865-874, 2003.

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A. Heimsath and H. Farid. Hillslope Topography from Unconstrained Photographs. *Mathematical Geology*, 34(8):929-952, 2002.

H. Farid. Temporal Synchrony in Perceptual Grouping: A Critique. *Trends in Cognitive Sciences*, 6(7):284-288, 2002.

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H. Farid and A.C. Popescu. Blind Removal of Lens Distortions. *Journal of the Optical Society of America*, 18(9):2072-2078, 2001.

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M.J. Bravo and H. Farid. Texture Perception on Folded Surfaces. *Perception*, 30(7):819-832, 2001.

R. van Ee, B. Anderson, and H. Farid. Occlusion Junctions do not Improve Stereoacuity. *Spatial Vision*, 15(1):45-49, 2001.

M.J. Bravo and H. Farid. Effects of 3D Structure on Motion Segmentation. *Vision Research*, 40(6):695-704, 2000.

X. Jiang, H. Farid, E. Pistor and R. S. Farid. A New Approach to the Design of Uniquely Folded Thermally Stable Proteins. *Protein Science*, 9:403-416, 2000.

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H. Farid and E.P. Simoncelli. Range Estimation by Optical Differentiation. *Journal of the Optical Society of America*, 15(7): 1777-1786, 1998.

E.P. Simoncelli and H. Farid. Steerable Wedge Filters for Local Orientation Analysis. *IEEE Transactions on Image Processing*, 5(9):1377-1382, 1996.

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H. Farid. How to Detect Faked Photos. *American Scientist*, March-April, 2017.

H. Farid. Seeing Is Not Believing. *IEEE Spectrum*, 46(8):44-48, 2009.

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H. Farid and S. Farid. Unfolding Sennedjem's Tomb. *KMT: A Modern Journal of Ancient Egypt*, 12(1):46-59, 2001.

PUBLICATIONS
(BOOK CHAPTERS)

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H. Farid. Digital Doctoring: can we trust photographs? In *Deception: From Ancient Empires to Internet Dating*, Stanford University Press, 2009.

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CONFERENCE
PAPER)

S. Agarwal, H. Farid, Y. Gu, M. He, K. Nagano, and H. Li. Protecting World Leaders Against Deep Fakes, *Workshop on Media Forensics at CVPR*, Long Beach, CA, 2019.

E. A. AlBadawy, S. Lyu, and H. Farid. Detecting AI-Synthesized Speech Using Bispectral Analysis. *Workshop on Media Forensics at CVPR*, Long Beach, CA, 2019.

- P. Singh and H. Farid. Robust Homomorphic Image Hashing. *Workshop on Media Forensics at CVPR*, Long Beach, CA, 2019.
- B. Lorch, S. Agarwal, and H. Farid. Forensic Reconstruction of Severely Degraded License Plates. *IS&T Electronic Imaging*, San Francisco, CA, 2019.
- W. Fan, S. Agarwal, and H. Farid. Rebroadcast Attacks: Defenses, Reattacks, and Redefenses. *European Signal Processing Conference*, Rome, Italy, 2018.
- S. Agarwal, W. Fan, and H. Farid. A Diverse Large-Scale Dataset for Evaluating Rebroadcast Attacks. *IEEE International Conference on Acoustics, Speech and Signal Processing*, Calgary, Alberta, Canada, 2018.
- S. Agarwal and H. Farid. Photo Forensics from JPEG Dimples. *IEEE Workshop on Image Forensics and Security*, Rennes, France, 2017.
- S. Agarwal, D. Tran, L. Torresani, and H. Farid. Deciphering Severely Degraded License Plates. *SPIE Symposium on Electronic Imaging*, San Francisco, CA 2017.
- T. Carvalho, H. Farid, and E. Kee. Exposing Photo Manipulation From User-Guided 3-D Lighting Analysis. *SPIE Symposium on Electronic Imaging*, San Francisco, CA, 2015.
- V. Conotter, E. Bodnari, G. Boato, and H. Farid. Physiologically-based Detection of Computer Generated Faces in Video. *International Conference on Image Processing*, Paris, France, 2014.
- M. Kirchner, P. Winkler and H. Farid. Impeding Forgers at Photo Inception. *SPIE Symposium on Electronic Imaging*, San Francisco, CA, 2013.
- E. Kee and H. Farid. Exposing Digital Forgeries from 3-D Lighting Environments. *IEEE Workshop on Information Forensics and Security*, Seattle, WA, 2010.
- V. Conotter, G. Boato and H. Farid. Detecting Photo Manipulation on Signs and Billboards. *International Conference on Image Processing*, Hong Kong, 2010.
- H. Malik and H. Farid. Audio Forensics from Acoustic Reverberation. *International Conference on Acoustics, Speech, and Signal Processing*, Dallas, TX, 2010.
- E. Kee and H. Farid. Digital Image Authentication from Thumbnails. *SPIE Symposium on Electronic Imaging*, San Jose, CA, 2010.
- H. Farid and M.J. Bravo. Image Forensic Analyses that Elude the Human Visual System. *SPIE Symposium on Electronic Imaging*, San Jose, CA, 2010.
- W. Wang and H. Farid. Exposing Digital Forgeries in Video by Detecting Double Quantization. *ACM Multimedia and Security Workshop*, Princeton, NJ, 2009.
- E. Kee and H. Farid. Printer Profiling for Forensics and Ballistics. *ACM Multimedia and Security Workshop*, Oxford, UK, 2008.
- W. Wang and H. Farid. Detecting Re-Projected Video. *10th International Workshop on Information Hiding*, Santa Barbara, CA, 2008.
- M.K. Johnson and H. Farid. Detecting Photographic Composites of People. *6th International Workshop on Digital Watermarking*, Guangzhou, China, 2007.
- W. Wang and H. Farid. Exposing Digital Forgeries in Video by Detecting Duplication. *ACM Multimedia and Security Workshop*, Dallas, TX, 2007.
- M.K. Johnson and H. Farid. Exposing Digital Forgeries Through Specular Highlights on the Eye.

9th International Workshop on Information Hiding, Saint Malo, France, 2007.

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M.K. Johnson and H. Farid. Exposing Digital Forgeries by Detecting Inconsistencies in Lighting. *ACM Multimedia and Security Workshop*, New York, NY, 2005.

S. Lyu, D. Rockmore, and H. Farid. Wavelet Analysis for Authentication. *Art + Math = X*, Boulder, CO, 2005.

J.E. Dobson, J.B. Woodward, S.A. Schwarz, J.C. Marchesini, H. Farid, and S.W. Smith. The Dartmouth Green Grid. *Workshop on High Performance Computing in Academia (in conjunction with International Conference on Computational Science)*, Atlanta, GA, 2005.

M.K. Johnson, S. Lyu and H. Farid. Steganalysis in Recorded Speech. *SPIE Symposium on Electronic Imaging*, San Jose, CA, 2005.

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H. Sun, H. Farid, K. Rick, A. Hartov, D.W. Roberts, and K.D. Paulsen. Estimating Cortical Surface Motion Using Stereopsis for Brain Deformation Models. *Medical Image Computing & Computer Assisted Intervention (MICCAI)*, Montreal, Canada, 2003.

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PUBLICATIONS
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ABSTRACT)

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D. Finnegan, G. Hamilton, L. Stearns, A. LeWinter, H. Farid, and H. Renedo. Tidewater Glacier Velocities from Repeat Ground-Based Terrestrial LiDAR Scanning; Helheim Glacier, Southeast Greenland. *Transactions of the American Geophysical Union*, San Francisco, CA, 2014.

M.J. Bravo and H. Farid. Search Templates Can be Adapted to the Context, but Only for Unfamiliar Targets. *Vision Sciences*, St. Pete Beach, FL, 2014.

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- H. Farid and M.J. Bravo. Photorealistic Rendering: How Realistic Is It? *Vision Sciences*, Sarasota, FL, 2007.
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- V. Maljkovic, P. Martini and H. Farid. The Time-Course of Categorization of Real-Life Scenes with Affective Content. *Vision Sciences*, Sarasota, FL, 2004.
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 Seeing is No Longer Believing, *The Christian Science Monitor*, 2.2.05
 Professors Who Are Changing the World, *New Hampshire Magazine*, 2.1.05
 Photoshop Sleuths, *MIT Technology Review*, 1.17.05
 Art Forgeries (with John Myatt), *BBC World Service*, 12.15.04
 Digital Forensics, *NHPR, Front Porch*, 12.14.04
 Debunking Photoshop Fakery, *New York Times (Year in Ideas)*, 12.12.04
 Is It Real or Is It Photoshopped, *Discover Magazine*, 9.27.04
 Doctored Digital Images, *NPR, Future Tense*, 7.27.04
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INVITED TALKS

Photo Forensics, *Amazon*. 8.19
 Creating, Weaponizing, and Detecting Deep Fakes, *USENIX*, 8.19 (keynote)
 Creating, Weaponizing, and Detecting Deep Fakes, *San Francisco Electronic Crimes Task Force*, 7.19
 Creation, Weaponization, and Detection of Deep Fakes, *D.C. Circuit Judicial Conference*, 6.19
 Digital Forensics: past, present, and future, *AI Foundation*, 6.19
 Digital Forensics: past, present, and future, *Workshop on Media Forensics at CVPR* (keynote), 6.19
 Protecting Children Online, *Missing & Exploited Children Training Conference*, 5.19
 Detecting Deep Fakes, *IEEE International Workshop on Fake Multimedia*, 3.19 (keynote)
 Fake Photos, *University of Florida*, 3.19
 Digital Forensics, *Google*, 3.19
 Digital Forensics, *Yahoo Research*, 12.18
 Photo Forensics from JPEG Coding Artifacts, *Stanford University*, 11.18
 Reining in Online Abuses, *University of California, Santa Barbara*, 10.18
 How Realistic is Photorealistic?, *University of California, Berkeley*, 10.18
 Digital Forensics, *SIGGRAPH Workshop on Truth in Images, Videos, and Graphics*, 8.18
 The Danger of Predictive Algorithms in Criminal Justice, *TEDx AmoskeagMillyard*, 6.18
 Reining in Online Abuses, *Plymouth State University*, 3.18
 Photo Forensics, *University of Pennsylvania*, 12.17
 Reining in Online Abuses, *Building Alliances - Preventing Terror*, Brussels Belgium, 10.17
 Reining in Online Abuses, *SUNY Albany, Massry Lecture*, 9.17

Photo Forensics, *University of California, Berkeley*, 9.17
 Reining in Online Abuses, *University of California, Berkeley*, 9.17
 Photographs, Hoaxes, and Conspiracies, *Gordon Conference: Visualization in Science*, 7.17
 Photo Forensics from JPEG Coding Artifacts, *Media Forensics Workshop at CVPR (keynote)*, 7.17
 Digital Video Forensics, *The Federal Judiciary Center*, 6.17
 Reining in Online Abuses, *Williams College*, 5.17
 Photo Forensics, *Williams College*, 5.17
 Digital Image Forensics, *Office of Research Integrity*, 4.17
 Digital Forensics: From Social Media to Social Impact, *National Academy of Inventors*, 4.17
 Reining in Online Abuses, *Council of Engineering Systems Universities*, 3.17
 Photo Forensics, *International Center of Photography*, 12.16
 Photo Forensics, *Columbia University*, 12.16
 Combating On-line Extremism, *United Nations*, 11.16
 Photo Forensics from Lighting and Shadows, *Duke University*, 3.16
 How Realistic is Photorealistic?, *Duke University*, 3.16
 Photo Forensics, *Middlebury College*, 10.15
 Photo Forensics and Verification, *TechRaking at MIT*, 9.15
 Photo Forensics, *University of Wisconsin, Madison*, 4.15
 Photo Forensics from Shadows & Shading, *SPIE Media Security, and Forensics (keynote)*, 1.14
 Photo Forensics, *University of Oregon*, 1.14
 Photo Forensics, *University of California, Riverside*, 1.14
 Photo Forensics, *University of Delaware*, 9.13
 Photo Forensics, *International Conference on Computational Photography (keynote)*, 4.13
 Image Manipulation in News, *Computation + Journalism Symposium*, 2.13
 Digital Forensics, *The World Bank*, 6.12
 Photo Retouching, *Information Hiding (keynote)*, 5.12
 Photo Forensics, *Stanford University*, 1.12
 Ethics and Forensics in the Age of Photoshop Photojournalism, *MIT*, 4.11
 Photo Forensics, *National Geographic*, 1.11
 Photo Forensics: Lighting and Shadows, *Harvard University*, 9.10
 Photo Forensics, *Applied Perception in Graphics & Visualization (keynote)*, 7.10
 Limitations of Visually-Based Image Forensics, *Massachusetts Institute of Technology*, 4.10
 Photo Forensics, *Massachusetts Institute of Technology*, 4.10
 Digital Image Forensics, *Yale University*, 4.10
 Digital Image Forensics, *IDGA Biometrics for National Security and Defense*, 3.10
 Visually-Based Image Forensics, *IDGA Biometrics for National Security and Defense*, 3.10
 Photo Forensics, *Smith-Kettlewell Eye Research Institute*, 2.10
 Digital Image Forensics, *Adobe Inc*, 1.10
 Digital Image Forensics, *University of Rochester*, 11.09
 On the Limitations of Visually-Based Image Forensics, *University of Rochester*, 11.09
 Photo Forensics, *Brown University*, 10.09
 Digital Forensics, *Biometrics: Theory, Applications and Systems (keynote)*, 9.09
 Digital Tampering and Forensics, *University of California, San Diego*, 4.09
 Image Forensics, *University of California, Berkeley*, 3.09
 Estimating and Modeling Complex Lighting Environments, *University of Pennsylvania*, 10.08
 Digital Tampering and Forensics, *National Institute of Standards*, 10.08
 Digital Tampering and Forensics, *University of Massachusetts, Amherst*, 10.08
 Digital Image Forensics, *American Society of Clinical Radiologists*, 9.08
 Digital Tampering and Forensics, *SUNY Albany*, 9.08
 Digital Tampering and Forensics, *Electronic Imaging Symposium (plenary talk)*, 1.08
 Digital Image Forensics, *The National Academies*, 1.08
 Digital Image Forensics, *IBM Almaden*, 11.07
 Digital Image Forensics, *University of California, Berkeley*, 11.07
 A Digital Technique for Art Authentication, *Harvard University Art Museum*, 10.07
 Digital Image Forensics, *Google*, 4.07
 Digital Image Forensics, *Foveon Inc.*, 4.07
 Exposing Digital Forgeries from Inconsistencies in Lighting, *Carnegie Mellon University*, 3.07
 Digital Forensics, *American Association for the Advancement of Science*, 2.07
 Digital Image Forensics, *The Associated Press*, 2.07
 Exposing Digital Forgeries from Inconsistencies in Lighting, *University of Pennsylvania*, 2.07
 Digital Tampering in the Media, Politics and Law, *University of Pennsylvania*, 2.07
 Digital Image Forensics, *Central Intelligence Agency*, 12.06
 From Photons to Pixels to Photoshop, *Project Safe Childhood Conference*, 12.06

Digital Image Forensics, *Stanford University*, 10.06
 From Photons to Pixels to Photoshop, *Crimes Against Children Conference*, 8.06
 Digital Image Forensics, *Microsoft Corp.*, 6.06
 A Digital Technique for Art Authentication, *Rochester Memorial Art Gallery*, 5.06
 Digital Image Forensics, *Eastman Kodak*, 5.06
 Digital Image Forensics, *Google*, 5.06
 Digital Image Forensics, *University of California, Davis*, 5.06
 Digital Image Forensics, *National Academy of Sciences*, 5.06
 A Digital Technique for Art Authentication, *San Diego Museum of Art*, 3.06
 A Picture is Worth a Thousand Lies, *Dartmouth College*, 2.06
 Digital Image Forensics, *Ricoh Innovations*, 11.05
 Energy vs. Synchrony in Perceptual Grouping, *University of California, San Diego*, 11.05
 From Photons to Pixels to Photoshop, *Delaware Department of Justice*, 9.05
 From Photons to Pixels to Photoshop, *High Tech. Crime Investigation Assoc.*, 8.05
 Digital Image Forensics, *National Association of Attorneys General*, 6.05
 How Realistic is Photorealistic?, *University of California, Santa Cruz*, 6.05
 Digital Image Forensics, *University of California, Berkeley*, 5.05
 Digital Image Forensics, *University of California, Santa Cruz*, 5.05
 Digital Image Forensics, *National Association of Attorneys General*, 5.05
 Digital Image Forensics, *Adobe Systems*, 4.05
 Digital Image Forensics, *Office of Research Integrity*, 1.05
 Digital Image Forensics, *University of New Hampshire*, 12.04
 Digital Image Forensics, *New Hampshire Cyber Crime Network*, 12.04
 Digital Image Forensics, *Leslie Center for the Humanities, Dartmouth College*, 11.04
 Reconstructing Ancient Egyptian Tombs, *Society for Imaging Science and Tech.*, 10.04
 Digital Image Forensics, *Adobe Systems*, 10.04
 Digital Image Forensics, *National Association of Attorneys General*, 9.04
 Digital Image Forensics, *University of Pennsylvania*, 7.04
 How Realistic is Photorealistic?, *University of Illinois*, 4.04
 Universal Steganalysis, *Central Intelligence Agency*, 2.04
 How Realistic is Photorealistic?, *The Salk Institute*, 1.04
 Grouping by Temporal Synchrony?, *The Salk Institute*, 1.04
 How Realistic is Photorealistic?, *Stevens Institute of Technology*, 12.03
 How Realistic is Photorealistic?, *Massachusetts Institute of Technology*, 11.03
 How Realistic is Photorealistic?, *Harvard University*, 11.03
 How Realistic is Photorealistic?, *University of Chicago*, 11.03
 How Realistic is Photorealistic?, *University of Maryland*, 11.03
 Grouping by Temporal Synchrony?, *University of Chicago*, 10.03
 Mixing and Unmixing Digital Images, *Harvard University*, 10.02
 Temporal Synchrony in Perceptual Grouping?, *University of Rochester*, 9.02
 Mixing and Unmixing Digital Images, *New York University*, 4.02
 Mixing and Unmixing Digital Images, *University of Pennsylvania*, 3.02
 Digital Tampering, *Washington University, St. Louis*, 1.02
 Digital Secrets, *Boston University*, 12.01
 Grouping by Temporal Synchrony, *Harvard University*, 11.01
 Blind Removal of Image Non-Linearities, *Columbia University*, 11.01
 Blind Removal of Image Non-Linearities, *Massachusetts Institute of Technology*, 10.01
 Grouping by Temporal Synchrony, *New York University*, 10.01
 Grouping by Temporal Synchrony, *Massachusetts Institute of Technology*, 3.01
 Grouping by Temporal Synchrony, *University of Pennsylvania*, 3.01
 Grouping by Temporal Synchrony, *Boston University*, 2.01
 Blind Removal of Image Non-Linearities, *University of Pennsylvania*, 3.00
 Digital Image Separation, *George Mason University*, 3.00
 Grouping in Temporally Synchronous Displays, *Dartmouth College*, 12.99
 Separating Digital Images, *Brooklyn Polytechnic University*, 3.99
 Separating Digital Images, *Dartmouth College*, 3.99
 ICA for Separating Images, *Massachusetts Institute of Technology*, 2.99
 Separating Images, *University of Pennsylvania*, 10.98
 Monocular Stereo, *Polaroid Inc*, 7.98
 Digital Image Enhancement, *Williams College*, 4.98
 Monocular Stereo, *Massachusetts Institute of Technology*, 3.98
 Range Estimation by Optical Differentiation, *University of California, Berkeley*, 3.97
 A Differential Optical Range Camera, *Sensar Inc.*, 11.96

Direct Differential Range Estimation, *Columbia University*, 5.96
Steerable Filters for Low-level Image Processing, *SUNY Albany*, 11.95
3-D Scene Reconstruction for Telepresence, *UNC, Chapel Hill*, 6.94

PROFESSIONAL
ACTIVITIES

IEEE Fellow, 2018
Phi Beta Kappa (honorary), 2017

ASSOCIATE
EDITOR

IEEE Transactions on Information Forensics and Security, 2005-2008

PROGRAM
COMMITTEE

IEEE Workshop on Image Forensics (WIFS), 2019
Workshop on Image Forensics, CVPR, 2017
IEEE Workshop on Image Forensics (WIFS), 2017
International Conference on Computational Photography, 2012-2015
Information Hiding, 2010
Media Security and Forensics (Electronic Imaging), 2009-2011
Technical Advisory Board for Berkman's Internet Safety Task Force, 2008
Vision of the Unseen (CVPR Workshop), 2008
Statistical Learning in Computer Vision (ECCV Workshop), 2004
American Association for Artificial Intelligence (Vision/Perception), 2004
Statistical Analysis in Computer Vision (CVPR Workshop), 2003

REVIEWER

NSF review panel (SBIR/STTR Phase I), 2018
NSF review panel (RI Small), 2013
NSF review panel (ITR Medium), 2003
NSF review panel (CAREER: RHA/CV), 2000, 2002, 2003
NSF review panel (RHA/CV), 2000
American Association for Artificial Intelligence (AAAI), Computer Analysis of Images and Patterns (CAIP), Computer Vision and Pattern Recognition (CVPR), Electronics Letters, European Conference on Computer Vision (ECCV), IEEE Transactions on Image Processing, IEEE Transactions on Multimedia, IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Signal Processing, IEEE Transactions on Information Security and Forensics, Information Hiding, International Conference on Computer Vision (ICCV), International Journal of Computer Vision, International Journal of Imaging Systems and Technology, Journal of Cognitive Neuroscience, Journal of the Optical Society of America, Journal of Visual Communication and Image Representation, Medical Physics, Perception, Proceedings of the Royal Society: Biological Sciences, SIGGRAPH, Vision and Applications, Vision Research

STUDENTS

Shruti Agarwal, Ph.D. advisor
Tiago Carvalho (2014), visiting Ph.D. student (UNICAMP, Brazil)
Emma Chiu '19, research advisor
Valentina Conotter (2011), Ph.D. co-advisor (University of Trento)
Julia Dressel '17, senior thesis advisor
Marc Faddoul (2019), M.S. advisor
Wei Fan (2018), postdoctoral advisor
Olivia Holmes '15, senior thesis advisor
Daniel Hopkins '10, research advisor
Kimo Johnson (2007), Ph.D. advisor
Eric Kee (2013), Ph.D. advisor
Jethro Rothe-Kushel '03, research advisor
Benedikt Lorch (2018), visiting M.S. student (University of Erlangen)
Siwei Lyu (2005), Ph.D. advisor
Brandon Mader '16, research advisor
David Martin '00, senior thesis advisor
Kiley McEvoy '06, research advisor
Sophie Nightingale (current), postdoctoral advisor
Joseph Pechter '04, senior thesis advisor
William Pechter '04, senior thesis advisor
Senthil Periaswamy (2003), Ph.D. advisor
Coralie Phanord '16, research advisor
Andrew Pierce '02, research advisor

Alin Popescu (2005), Ph.D. advisor
Nelson Rosa '06, research advisor
Katherine Sherwin '01, research advisor
Priyanka Singh (2019), postdoctoral advisor
Hai Sun (2004), Ph.D. co-advisor
Sydni Topper '18, research advisor
Joshua Wang '15, thesis advisor
Weihong Wang (2009), Ph.D. advisor
Angela Zhu '17, research advisor

TEACHING

Foundations of Applied Computer Science, CS1 11, Spring 2018
Data Structures and Analytics, Tuck School of Business, Spring 2017
Fundamentals of Web Programming, Tuck School of Business, Spring 2017
Introduction to Programming and Computation, CS 1, Fall 2016
Fundamentals of Web Programming, Tuck School of Business, Spring 2016
Numerical and Computational Tools for Applied Science, CS 70/170, Spring 2016
Introduction to Programming and Computation, CS 1, Fall 2015
Numerical and Computational Tools for Applied Science, CS 70/170, Spring 2015
Introduction to Programming and Computation, CS 1, Fall 2014
Introduction to Programming and Computation, CS 1, Spring 2014
Introduction to Programming and Computation, CS 1, Spring 2013
Digital Image Forensics, CS 89/189, Spring 2013
Digital Forensics, University of Trento, Italy, Spring 2011
Numerical and Computational Tools for Applied Science, CS 36/136, Summer 2008
Concepts in Computing, CS 4, Summer 2008
Numerical and Computational Tools for Applied Science, CS 36/136, Summer 2007
Concepts in Computing, CS 4, Summer 2007
Concepts in Computing, CS 4, Winter 2006
Numerical Methods in Computer Vision, CS 88/188, Fall 2004
Concepts in Computing, CS 4, Summer 2003
Concepts in Computing, CS 4, Summer 2002
Data Structures and Programming, CS 15, Winter 2002
Data Structures and Programming, CS 15, Fall 2001
Numerical Linear Algebra, CS106, Spring 2001
Data Structures and Programming, CS 15, Winter 2001
Data Structures and Programming, CS 15, Fall 2000
Fundamentals of Image Processing, CS 88/188, Spring 2000
Programming Languages, CS 68, Winter 2000
Data Structures and Programming, CS 15, Fall 1999

COLLEGE COMMITTEES

Department Chair, 2015-2018
Committee Advisory to the President (tenure & promotions), 2016-2018
Department Associate Chair, 2004-2009
Ph.D. Advisor, 2004-2006
Steering Committee, Neuroscience Major, 2004-2008
Director Search, Neukom Institute for Computational Science, 2005
HHMI Undergraduate Biological Sciences Education Proposal, 2005
Green Grid Computing, 2004-2005
Computer Science Building Expansion, 2003-2005
Faculty Search, Thayer School of Engineering, 2004
Department Web Master, 1999-2004
Faculty Recruiting, 2003, 2010-2011
Ph.D. Admissions 2001-2003, 2010, 2012
Associate Director Search, ISTS, 2002
M.D./Ph.D. Admissions, 2001

TESTIMONY

European Parliament Special Committee on Terrorism, 4.24.18
Singapore Select Committee on Deliberate Online Falsehoods, 3.27.18
United States Senate Judiciary, 9.3.17 (topic: on-line extremism)
United Nations Counter-Terrorism Committee Executive Directorate, 11.30.16

EXPERT WITNESS
TESTIMONY

Qualcomm Inc. v. Apple Inc., U.S. International Trade Commission, 2018
Qualcomm Inc. v. Apple Inc., U.S. District Court of Southern District of California, 2018
Lanutti v. Children’s Hospital of Pennsylvania, Philadelphia, Pennsylvania, 2018
Salenger v. Inergy, 2017
United States of America v. Sweeney, 2016
Adobe v. Everyscape, Boston, Massachusetts, 2015
Hargett v. Frost, Indianapolis, Indiana, 2014 (deposition)
Ceglia v. Zuckerberg, 2012, (deposition)
United States of America v. Paul Burdulis, Worcester, Massachusetts, 2012
Garza, et al. v. Allied Chemical Corporation, et al., Hidalgo County, Texas, 2009
Operation Algebra, Edinburgh, Scotland, 2009
Pack v. Ross, et al, Nashville, Tennessee, 2009
State of New Hampshire. v. Katherine Johnson, 2009
DesertMicro v. Piersall, Jacksonville, Florida, 2007
State of Florida v. Michael Quattrocchi, 2007
State of Maine v. Melvin Logan, 2007
United States of America v. San Diego Gas & Electric Company, et al., 2007
State of Ohio v. David Harrison, 2006
State of New Hampshire v. John Lacroix, 2005
Graphic Security Systems v. Nautilus Security, 2005
State of Ohio v. Mark A. Heilman, 2004