

## Michael Maire

Research Assistant Professor  
Toyota Technological Institute at Chicago

**Email:** [mmaire@ttic.edu](mailto:mmaire@ttic.edu)

**Web:** <http://ttic.uchicago.edu/~mmaire>

## EDUCATION

University of California at Berkeley	Computer Science	Ph.D.	2009
California Institute of Technology	Electrical and Computer Engineering	B.S.	2003

## APPOINTMENTS

2014 – present	Research Assistant Professor, Toyota Technological Institute at Chicago, Chicago, IL
2013 – 2014	Senior Postdoctoral Scholar, California Institute of Technology, Pasadena, CA
2009 – 2013	Postdoctoral Scholar, California Institute of Technology, Pasadena, CA
Sep 2009	Postdoctoral Scholar, University of California at Berkeley, Berkeley, CA

## PUBLICATIONS

- [22] Gustav Larsson, Michael Maire, and Gregory Shakhnarovich. *Colorization as a Proxy Task for Visual Understanding*. Computer Vision and Pattern Recognition (CVPR), 2017.
- [21] Tsung-Wei Ke, Michael Maire, and Stella X. Yu. *Multigrid Neural Architectures*. Computer Vision and Pattern Recognition (CVPR), 2017.
- [20] Gustav Larsson, Michael Maire, and Gregory Shakhnarovich. *FractalNet: Ultra-Deep Neural Networks without Residuals*. International Conference on Learning Representations (ICLR), 2017.
- [19] Gustav Larsson, Michael Maire, and Gregory Shakhnarovich. *Learning Representations for Automatic Colorization*. European Conference on Computer Vision (ECCV), 2016.
- [18] Michael Maire, Takuya Narihira, and Stella X. Yu. *Affinity CNN: Learning Pixel-Centric Pairwise Relations for Figure/Ground Embedding*. Computer Vision and Pattern Recognition (CVPR), 2016.
- [17] Takuya Narihira, Michael Maire, and Stella X. Yu. *Direct Intrinsic: Learning Albedo-Shading Decomposition by Convolutional Regression*. International Conference on Computer Vision (ICCV), 2015.
- [16] Takuya Narihira, Michael Maire, and Stella X. Yu. *Learning Lightness from Human Judgement on Relative Reflectance*. Computer Vision and Pattern Recognition (CVPR), 2015.
- [15] William T. Gibson, Carlos R. Gonzalez, Conchi Fernandez, Lakshminarayanan Ramasamy, Tanya Tabachnik, Rebecca R. Du, Panna D. Felsen, Michael R. Maire, Pietro Perona, and David J. Anderson. *Behavioral Responses to a Repetitive Visual Threat Stimulus Express a Persistent State of Defensive Arousal in Drosophila*. Current Biology, 25(11):1401-1415, 2015.
- [14] Michael Maire, Stella X. Yu, and Pietro Perona. *Reconstructive Sparse Code Transfer for Contour Detection and Semantic Labeling*. Asian Conference on Computer Vision (ACCV), 2014.
- [13] Tsung-Yi Lin, Michael Maire, Serge Belongie, James Hays, Pietro Perona, Deva Ramanan, Piotr Dollár, and C. Lawrence Zitnick. *Microsoft COCO: Common Objects in Context*. European Conference on Computer Vision (ECCV), 2014.
- [12] Michael Maire and Stella X. Yu. *Progressive Multigrid Eigensolvers for Multiscale Spectral Segmentation*. International Conference on Computer Vision (ICCV), 2013.
- [11] Michael Maire, Stella X. Yu, and Pietro Perona. *Hierarchical Scene Annotation*. British Machine Vision Conference (BMVC), 2013.

- [10] Michael Maire, Stella X. Yu, and Pietro Perona. *Object Detection and Segmentation from Joint Embedding of Parts and Pixels*. International Conference on Computer Vision (ICCV), 2011.
- [9] Patrik Sundberg, Thomas Brox, Michael Maire, Pablo Arbeláez, and Jitendra Malik. *Occlusion Boundary Detection and Figure/Ground Assignment from Optical Flow*. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2011.
- [8] Pablo Arbeláez, Michael Maire, Charless Fowlkes, and Jitendra Malik. *Contour Detection and Hierarchical Image Segmentation*. IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2011.
- [7] Michael Maire. *Simultaneous Segmentation and Figure/Ground Organization using Angular Embedding*. European Conference on Computer Vision (ECCV), 2010.
- [6] Pablo Arbeláez, Michael Maire, Charless Fowlkes, and Jitendra Malik. *From Contours to Regions: An Empirical Evaluation*. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2009.
- [5] Michael Maire, Pablo Arbeláez, Charless Fowlkes, and Jitendra Malik. *Using Contours to Detect and Localize Junctions in Natural Images*. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2008.
- [4] Hao Zhang, Alexander C. Berg, Michael Maire, and Jitendra Malik. *SVM-KNN: Discriminative Nearest Neighbor Classification for Visual Category Recognition*. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2006.
- [3] Jaety Edwards, Yee Whye Teh, David A. Forsyth, Roger Bock, Michael Maire, and Grace Vesom. *Making Latin Manuscripts Searchable using gHMM's*. Neural Information Processing Systems (NIPS), 2004.
- [2] Tamara L. Berg, Alexander C. Berg, Jaety Edwards, Michael Maire, Ryan White, Yee Whye Teh, Erik Learned-Miller, and David A. Forsyth. *Names and Faces in the News*. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2004.
- [1] Pierre Moreels, Michael Maire, and Pietro Perona. *Recognition by Probabilistic Hypothesis Construction*. European Conference on Computer Vision (ECCV), 2004.

## SERVICE

- Meta-Reviewer: AAAI 2018 (senior program committee), CVPR 2016 (area chair)
- Reviewer: ACM SIGGRAPH (2010, 2017), Eurographics (2014), ECCV (2010, 2012, 2014, 2016), CVPR (2010 – 2015, 2017), ICCV (2011, 2013, 2015, 2017), ICLR (2017), NIPS (2015, 2016, 2017), CVIU (2010, 2011), IEEE TIP (2010 – 2015), IEEE TPAMI (2008 – 2017)
- Workshops:
  - Joint Workshop of the COCO and Places Challenges at ICCV 2017 (workshop organizer and member of award committee for COCO challenge)
  - 2nd ImageNet and COCO Visual Recognition Challenge at ECCV 2016 (member of award committee for COCO challenge)
  - Joint ImageNet and COCO Visual Recognition Challenge at ICCV 2015 (member of award committee for COCO challenge)
  - Perceptual Organization in Computer Vision (POCV) at CVPR 2014 (workshop organizer)
- Member of Common Visual Data Foundation (<http://www.cvdfoundation.org/>)
- Member of COCO dataset team (<http://cocodataset.org/>)