

Gregory Shakhnarovich

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EDUCATION

- ◇ **Massachusetts Institute of Technology**, Cambridge, MA.
Ph.D. in Computer Science, 2005. Thesis: *Learning Task Specific Similarity*.
- ◇ **Technion–Israel Institute of Technology**, Haifa, Israel.
M.Sc. (cum laude) in Computer Science, 2001.
- ◇ **Hebrew University**, Jerusalem, Israel.
B.Sc. (cum laude) in Mathematics and Computer Science, 1994.

CURRENT APPOINTMENTS

- ◇ **Professor**, Toyota Technological Institute at Chicago, since October 2020.
- ◇ **Professor, part-time** Computer Science, University of Chicago, since January 2022.

PAST APPOINTMENTS

- ◇ **Associate Professor**, Toyota Technological Institute at Chicago, 2016-2020.
- ◇ **Associate Professor, part-time**, Department of Computer Science, University of Chicago, 2017-2022.
- ◇ **Assistant Professor**, Toyota Technological Institute at Chicago, 2008-2016.
- ◇ **Assistant Professor, part-time**, Department of Computer Science, University of Chicago, 2009-2016.
- ◇ **Postdoctoral Research Associate**, Department of Computer Science and Brain Science Program, Brown University, October 2005-2008.

TEACHING

- ◇ **Introduction to Computer Vision** TTIC/University of Chicago, 2021-present.
- ◇ **Introduction to Statistical Machine Learning** TTIC/University of Chicago, 2010-present; Weizmann Institute of Science, 2011-2015; Brown, 2006.
- ◇ **Introduction to Computer Vision** TTIC/University of Chicago, 2010.
- ◇ **Large Scale Learning** TTIC, 2009.

ADVISING

Current PhD students

- Xiaodan Du, TTIC, 2020–present.
Jiahao Li, TTIC, 2020–present.
Haochen Wang, TTIC, 2021–present
Marcelo Sandoval-Castañeda, 2022-present

Graduated PhD students

- Igor Vasiljevic, TTIC, 2017-2022. After graduation: Research Scientist, Toyota Research Institute.
Nicholas Kolkin, TTIC, 2015–2021. After graduation: Research Engineer, Adobe Research.
Ruotian Luo, TTIC, 2015–2021. After Graduation: Software Engineer, Waymo Perception.
Mohammadreza Mostajabi, TTIC, 2013–2019. After graduation: Research Engineer, Zendar Inc.
Shubhendu Trivedi, TTIC, 2012–2018. After graduation: ICERM Institute fellow, Brown University. Then: postdoctoral researcher, MIT CSAIL.
Gustav Larsson, University of Chicago, 2014–2017. After graduation: Machine Learning Engineer, Apple Inc.
Payman Yadollahpour, TTIC, 2009–2017. After graduation: postdoc at University of Pittsburgh/MIT CSAIL. Then: postdoc, Broad Institute, MIT/Harvard.

Graduated masters students

- Andreas Hoenselaar, Brown, 2007 (continued to PhD at Caltech).
Taehwan Kim, TTIC, 2011 (continued to PhD at TTIC).

SELECTED PUBLICATIONS

- H. Wang, X. Du, J. Li, R. Yeh, G. Shakhnarovich, *Score jacobian chaining: Lifting pretrained 2d diffusion models for 3d generation*, Conference on Computer Vision and Pattern Recognition, 2023.
J. Fang, I. Vasiljevic, V. Guizilini, R. Ambrus, G. Shakhnarovich, A. Gaidon, M. Walter, *Self-Supervised Camera Self-Calibration from Video*, International Conference on Robotics and Application, 2022.
P. Savarese, S. SY Kim, M. Maire, G. Shakhnarovich, D. McAllester, *Information-theoretic segmentation by inpainting error maximization*, Conference on Computer Vision and Pattern Recognition, 2021.
I. Vasiljevic, V. Guizilini, R. Ambrus, S. Pillai, W. Burgard, G. Shakhnarovich, A. Gaidon, *Neural Ray Surfaces for Self-Supervised Learning of Depth and Ego-motion*, Conference on 3D Vision, 2020.

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- N. Kolkin, J. Salavon, G. Shakhnarovich, *Style Transfer by Relaxed Optimal Transport and Self-Similarity*, Conference on Computer Vision and Pattern Recognition, 2019.
- B. Shi, A. Martinez Del Rio, J. Keane, D. Brentari, G. Shakhnarovich, K. Livescu, *Fingerspelling Recognition in the Wild With Iterative Visual Attention*, International Conference on Computer Vision, 2019.
- M. Haris, G. Shakhnarovich, N. Ukita, *Deep back-projection networks for super-resolution*, Conference on Computer Vision and Pattern Recognition, 2018.
- R. Luo, B. Price, S. Cohen, G. Shakhnarovich, *Discriminability objective for training descriptive captions*, Conference on Computer Vision and Pattern Recognition, 2018.
- G. Larsson, M. Maire, G. Shakhnarovich, *Fractalnet: Ultra-deep neural networks without residuals*, International Conference on Learning Representations, 2017.
- G. Larsson, M. Maire, G. Shakhnarovich, *Learning representations for automatic colorization*, European Conference on Computer Vision, 2016.
- M. Mostajabi, P. Yadollahpour, G. Shakhnarovich, *Feedforward semantic segmentation with zoom-out features*, Conference on Computer Vision and Pattern Recognition, 2015.
- D. Batra, P. Yadollahpour, A. Guzman-Rivera, G. Shakhnarovich, *Diverse M-Best Solutions in Markov Random Fields*, European Conference on Computer Vision, 2012.
- G. Shakhnarovich, P. Viola, T. Darrell, *Fast Pose Estimation with Parameter Sensitive Hashing*, International Conference on Computer Vision, 2003.

SELECTED INTERNAL SERVICE

Director of Admissions, TTIC PhD program, 2014-present

Co-chair, TTIC Committee on Diversity, Equity and Inclusion, 2020-present.

Faculty Liaison for Information Technology, TTIC, 2009-present.

SELECTED EXTERNAL SERVICE

Area Chair: International Conference on Machine Learning (ICML), Neural Information Processing Systems (NeurIPS), International Conference on Learning Representations (ICLR), International Conference on Computer Vision (ICCV), Conference on Computer Vision and Pattern Recognition (CVPR), European Conference on Computer Vision (ECCV) – multiple years each.

Founding organizer and steering committee member, Midwest Computer Vision Workshop, 2009-present.

Associate Editor, IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016-present.

AWARDS AND HONORS

- ◇ **Innovation Award** (Panoptic segmentation challenge), ICCV 2019 Annual COCO and Mapillary Workshop (with H. Wang, R. Luo)
- ◇ **Challenge Winner**, CVPR 2019 Workshop on Conceptual Captions (with R. Luo, G. Vered, L. Bracha, G. Chechik)
- ◇ **Challenge Winner**, Image super-resolution challenge (Track 1, “classis bicubic”), Workshop on New Trends in Image Restoration and Enhancement, 2018 (with M. Haris and N. Ukita).
- ◇ **IBM Faculty Award**, 2013.
- ◇ **Google Faculty Research Award**, 2013, (with C. Dyer, K. Gimpel, D. Batra)
- ◇ **Feinberg Visiting Faculty Fellowship**, Weizmann Institute of Science, 2011 and 2012.