Prof. Iddo Drori - Curriculum Vitae

Contact Information

Yeshiva University
Dept. of Computer Science & Engineering
205 Lexington Avenue
New York, NY 10016
iddo.drori@yu.edu

Stanford University
Dept. of Management Science & Engineering
475 Via Ortega
Stanford, CA 94305
idrori@stanford.edu

Tel Aviv University
School of Management
30 Chaim Levanon Street
Tel Aviv, 6997801, Israel
idrori@post.tau.ac.il

Academic Experience

Yeshiva University, New York, USA
Associate Professor, Department of Computer Science and Engineering, 2025-present
Tenure Track

Tel Aviv University, Israel
Visiting Associate Professor, School of Management, 2025-present

Stanford University, California, USA
Visiting, Department of Management Science and Engineering, 2025-present

Boston University, Boston, USA
Associate Professor of the Practice, Department of Computer Science, 2022-2025
Director of MS in AI, Department of Computer Science, 2022-2024
Co-Director of MS Admissions, Department of Computer Science, 2023-2024

Columbia University, New York, USA
Adjunct Associate Professor, Department of Computer Science, 2019-2023
Adjunct Assistant Professor, Department of Computer Science, 2017-2019

Massachusetts Institute of Technology, Cambridge, USA
Visiting Associate Professor, Computer Science and Artificial Intelligence Lab (CSAIL), 2022-2023
Lecturer, Department of Electrical Engineering and Computer Science (EECS), 2020-2022

Cornell University, New York, USA
Visiting Associate Professor, School of Operations Research & Information Engineering, 2019-2020

New York University, New York, USA
Research Scientist, Tandon School of Engineering and Center for Data Science, 2017-2019
Adjunct Associate Professor, Center for Data Science, 2017-2019
Adjunct Associate Professor, Tandon School of Engineering, 2018-2019

Tel Aviv University, Israel
Lecturer, Faculty of Management, Information Systems, 2016-2017

College of Management, Israel
Senior Lecturer (Associate Professor), School of Computer Science, 2016-2018
Head of Data Science Specialization, 2016-2017

Stanford University, California, USA
Instructor, Department of Statistics, 2006

Education

Stanford University, California, USA
Post-Doctoral Fellow, Statistics, 2004-2007

Tel Aviv University, Israel
Ph.D., Computer Science, 2001-2004
M.B.A., Entrepreneurship and Organizational Behavior, 2007-2009

Hebrew University of Jerusalem, Israel
M.Sc., Computer Science, **Magna Cum Laude**, 1998-2000
B.Sc., Mathematics and Computer Science, **Amirim Honors Program**, 1994-1997

Industry Experience

AI consulting

- **North Atlantic Industries** embedded computing for Aero and Defense, Summer 2025
- **MicroBlink** identity verification, Summer 2024

AdiMap, Tel Aviv, Israel (acquired by VEN Commerce)
Founder and CEO, 2011-2017
Data Science: online advertising and e-commerce data analysis

- **Nielsen** data provider, 2014-2015
- **eBay** big data lab, 2014
- **Amazon** technology partner, 2012-2017
- **Google** partner and service agreement, 2012-2017

Mintigo, Israel (acquired by Anaplan)
Research Scientist, 2010

- Data Science: mobile network data analysis and churn prediction

Gizmoz, Tel Aviv, Israel (acquired by DAZ 3D)
Research Scientist, 2008-2009

- Computer Vision and Graphics: 3D face reconstruction and swapping

PrimeSense, Tel Aviv, Israel (acquired by Apple)
Research Scientist, 2007

- Computer Vision and Graphics: 3D human pose estimation and rigging

Teaching Experience

Yeshiva University, Department of Computer Science and Engineering

- Artificial General Intelligence, Fall 2025
- Computer Science Math, Fall 2025

Boston University, Department of Computer Science

- Artificial General Intelligence: Summer 2023, Fall 2023, Sum. 2024, Fall 2024, Spring 2025
- Deep Learning: Fall 2022, Summer 2023, Fall 2023, Spring 2024, Summer 2024, Fall 2024, Spring 2025
- Artificial Intelligence: Fall 2022, Spring 2023, Spring 2024
- Principles of Machine Learning: Spring 2023, Fall 2023, Spring 2024

Columbia University, Department of Computer Science

- Artificial General Intelligence: Summer 2023
- Advanced Deep Learning: Summer 2022
- Deep Learning: Fall 2017, Spring 2018, Fall 2018, Spring 2019, Summer 2019, Fall 2019, Spring 2020, Summer 2021, Spring 2022

Massachusetts Institute of Technology, Dept. of Electrical Engineering and Computer Science
- Meta Learning: Fall 2020
- Applied Machine Learning: Fall 2020, Spring 2021
- Introduction to Machine Learning: Fall 2020, Spring 2021, Fall 2021, Spring 2022

New York University, Center for Data Science, Courant Institute of Mathematical Sciences
- Introduction to Data Science: Spring 2018, Spring 2019
- Introduction to Machine Learning: Fall 2018
- Optimization and Computational Linear Algebra: Fall 2017

New York University, Tandon School of Engineering, Computer Science and Engineering
- Deep Learning: Spring 2018, Fall 2018, Spring 2019

Tel Aviv University, Faculty of Management, Information Systems
- Data Visualization: Fall 2016, Spring 2017

College of Management, School of Computer Science
- Introduction to CyberSecurity: Spring 2016, Summer 2016, Spring 2017
- Introduction to Data Science: Spring 2017
- Seminar on Advanced Topics in Data Science: Spring 2017
- Software Project Management: Spring 2016, Summer 2016
- Final Project Advisor: Fall 2016, Spring 2017

Stanford University, Department of Statistics
- Statistical Methods in Engineering and the Physical Sciences: Summer 2006

Course Development

Artificial General Intelligence, Columbia University, 2022
Meta Learning, Massachusetts Institute of Technology, 2020
Deep Learning, Columbia University, 2017

Senior Area Chair (SAC)

1. Neural Information Processing Systems (NeurIPS) Datasets and Benchmarks 2023, 2024, 2025
2. International Conference on Machine Learning (ICML) 2024, 2025

Program Committee (PC), Area Chair (AC)

3. International Conference on Learning Representations (ICLR)
4. Neural Information Processing Systems (NeurIPS)
5. International Conference on Machine Learning (ICML)
6. AAAI Conference on Artificial Intelligence1
7. European Conference on Computer Vision (ECCV)
8. Neural Information Processing Systems (NeurIPS) Datasets and Benchmarks
9. ICML Workshop on Automatic Machine Learning
10. ICLR Workshop on Neural Architecture Search
11. EAAI: AAAI Symposium on Educational Advances in Artificial Intelligence
12. MLCB, Machine Learning in Computational Biology
13. PKDD, European Conference on Machine Learning (ECML)
14. HILDA, ACM SIGMOD
15. IEEE VIS, DSIA

Reviewer

1. IEEE/CVF Conference on Computer Vision and Pattern Recognition, 2022, 2023, 2024, 2025
2. Neural Information Processing Systems (NeurIPS), 2019, 2020, 2021, 2022, 2023, 2024, 2025
3. International Conference on Learning Representations (ICLR), 2021, 2022, 2023, 2024, 2025
4. International Conference on Machine Learning (ICML), 2019, 2021, 2022, 2023, 2024
5. AAAI Conference on Artificial Intelligence, 2020, 2021, 2022
6. IEEE/CVF International Conference on Computer Vision (ICCV), 2025
7. European Conference on Computer Vision (ECCV), 2024
8. Neural Information Processing Systems (NeurIPS) Datasets and Benchmarks, 2022, 2023
9. IEEE Transactions on Pattern Analysis and Machine Intelligence
10. IEEE Transactions on Image Processing
11. IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)
12. IEEE Transactions on Signal Processing
13. Journal of Machine Learning Research (JMLR)
14. ACM Transactions on Graphics (ToG), ACM SIGGRAPH
15. IEEE Transactions on Visualization and Computer Graphics (TVCG)
16. ACM SIGMOD International Conference on Management of Data
17. Computer Vision and Image Understanding
18. EURASIP Journal on Advances in Signal Processing
19. Eurographics/IEEE VGTC Conference on Visualization
20. Eurographics
21. IEEE Visualization Conference
22. SIAM Journal on Multiscale Modeling and Simulation
23. ICML AutoML
24. AAAI EAAI
25. Machine Learning for Computational Biology
26. ICML Workshop on Generative AI and Biology
27. International Conference on Artificial Intelligence and Statistics (AISTATS)
28. Proceedings of the National Academy of Sciences
29. Dutch Research Council (NWO)
30. Israel Science Foundation (ISF)
31. MIT Press
32. US Department of Energy, Office of Science, Advanced Scientific Computing Research (ASCR)

Advising / Committee

- Sunny Tran, Masters of Engineering, MIT, 2021
  Thesis: Solving machine learning problems
- Allan Costa, Masters of Media Arts and Sciences, MIT, 2021
  with Debora Marks and Joseph Jacobson
  Thesis: Predicting protein-protein interactions using equivariant networks with self-attention
- Oscar Chang, PhD in Computer Science, Columbia University, 2020
  with Hod Lipson, Itsik Pe'er, Ansaf Salleb-Aouissi, Erin L. Barnhart
  Thesis: Autogenerative networks
- Weiyi Lu, Masters of Arts and Sciences, Columbia University, 2019
  with Michael Collins and Kathleen McKeown
  Thesis: Inductive representation learning for knowledge base completion
- Seunghwan Hyun, Masters in Computer Science, Boston University, 2025
  Thesis: Solving the abstraction and reasoning corpus (ARC) at a human level
- Directed Study, Boston University
  1. Aditya Bhandari, Spring 2025
  2. Seunghwan Hyun, Fall 2024
  3. Shivacharan Oruganti, Fall 2024
  4. Ayush Sharma, Spring 2024
  5. Uday Garg, Spring 2024
  5. Mao Mao, Spring 2024
  6. Jason Lee, Fall 2023
  7. Owen Chen, Summer 2023
  9. Harsh Sharma, Spring 2023
  10. Keith Tyser, Fall 2022
- Undergraduate Research Opportunities Program (UROP)
  1. Jason Lee, Spring 2024, BU
  2. Annie Wang, Spring 2023, Summer 2023, MIT
  3. Iris Yang, Summer 2023, MIT
  4. Calvin Macatantan, Summer 2023, MIT
  5. Ashley Zhang, Summer 2023, MIT
  6. Samuel Florin, Spring 2023, MIT
  7. Sarah J. Zhang, Spring 2023, MIT
  8. Eugenia Feng, Spring 2023, MIT
  9. Alice Zhang, Spring 2023, MIT
  10. Andrei Marginean, Spring 2023, MIT
  11. Reece Shuttleworth, Spring 2022, Summer 2022, MIT
  12. Sarah Zhang, Summer 2022, MIT
  13. Pedro Lantigua, Summer 2022, MIT
  14. Muhender Rajvee, Spring 2022, MIT
  15. Albert Lu, Spring 2022, MIT
  16. Michelle He, Spring 2022, MIT
  17. Linda Chen, Spring 2022, MIT
  18. Elizabeth Ke, Fall 2021, MIT
  19. Kevin Liu, Fall 2021, MIT
  20. Prabhakar Kafle, Spring 2021, MIT
  21. Pranav Krishna, Spring 2021, MIT
  22. Ishan Pakuwal, Spring 2021, MIT
  23. Alexander Gu, Fall 2020, MIT
  24. Sunny Tran, Fall 2020, MIT
- Ph.D. in Data Science (rotation), Boston University
  Yuke Zhang, 2023-2024

Recent Awards

1. **Abstraction and Reasoning Corpus (ARC) Prize Competition**
   Silver medal, 2024
2. **International Mathematical Olympiad (IMO) Competition: AI X Prize**
   Silver medal, 2024
3. **NeurIPS 2022 Learning from Human Feedback in Minecraft** 3rd place (mentor)
4. **NeuriPS 2022 Neural Massively Multiplayer Online** silver winner (mentor)
5. **NeurIPS 2021 CCAI** Best paper award winner
6. **FG 2021 Kinship Verification** 1st place competition winner (mentor)
7. **ACML 2021** Best student paper award winner
8. **ICCV 2019 Learning to Drive** 1st and 2nd place competition winner (mentor)
9. **Tel Aviv University 2017 Teaching Excellence** Award for highest student surveys

Publications

81. **Artificial general intelligence: Mathematical foundations**
    Iddo Drori
    Cambridge University Press, 2025
    In Progress
    `www.agibook.org`

80 **Automated research with human oversight**
Iddo Drori and Dov Te'eni
Submitted, 2025. (CF)

79. **AI co-scientist for the Habitable Worlds Observatory**
    Avi Shporer and **Iddo Drori**
    Towards the Habitable Worlds Observatory:
    Visionary Science and Transformational Technology, 2025 (CF)

78. **AI passes Humanity's Last Exam and generates educational video explanations**
    Gaston Longhitano, Aditya Bhandari, Mao Mao, Ben Segev, Avi Shporer, Joaquin Vanschoren, Alon Amit, Madeleine Udell, **Iddo Drori**
    Submitted, 2025 (CF)

77. **Diverse inference and verification for advanced reasoning**
    Iddo Drori, Gaston Longhitano, Mao Mao, Seunghwan Hyun, Yuke Zhang, Sungjun Park, Zachary Meeks, Xin-Yu Zhang, Ben Segev, Howard Yong, Nakul Verma, Avi Shporer, Alon Amit, Madeleine Udell
    Submitted, 2025 (CF)

76. **Common AI innovation framework competition**
    Iddo Drori, Avi Shporer, Nakul Verma, Madeleine Udell
    IEEE International Conference on Automatic Face and Gesture Recognition, 2025. (CF)
    `https://sites.google.com/view/ai-innovation-competition-fg25`

75. **All diffusion photo-realistic real-time AI interviewers**
    Mehul Bafna, Mohammadzubair Khan, **Iddo Drori**
    In progress, 2025. (CF)

74. **Solving the International Mathematical Olympiad, Harvard University Mathematics PhD Qualifying Exams, and MIT's EECS curriculum at a human level**
    Iddo Drori, Cindy Zhang, Ryan Nie, Chunhao Bi, Ayush Sharma, Uday Garg, Shreyas Sudarsan, Seunghwan Hyun, Bargav Jagatha, Zack Meeks, Xi Chen, Akshat Gurbaxani, Abhaya Shukla, Nicholas Belsten, Ori Kerret, Avi Shporer, Madeleine Udell
    In progress, 2024. (JR)

73. **AI-driven review systems: Evaluating LLMs in scalable and bias-aware academic reviews**
Keith Tyser, Ben Segev, Gaston Longhitano, Xin-Yu Zhang, Zachary Meeks, Jason Lee, Uday Garg, Nicholas Belsten, Avi Shporer, Madeleine Udell, Dov Te'eni, **Iddo Drori**
Submitted, 2024. (CF)
`www.reviewerarena.com, www.paperswithreviews.com, www.openreviewer.com`

72. **Human-in-the-Loop AI Reviewing: Feasibility, opportunities, and risks**
Iddo Drori and Dov Te'eni
Journal of the Association for Information Systems 25 (1), 98-109, 2024. (JR)

71. **The science of deep learning**
Iddo Drori
Cambridge University Press, 2023
In press, ISBN: 9781108835084.
`www.dlbook.org`

70. **From human days to machine seconds: Automatically answering and generating machine learning final exams**
Iddo Drori, Sarah J. Zhang, Reece Shuttleworth, Sarah Zhang, Zad Chin, Pedro Lantigua, Saisamrit Surbehera, Gregory Hunter, Derek Austin, Leonard Tang, Yann Hicke, Sage Simhon, Sathwik Karnik, Darnell Granberry, Madeleine Udell
ACM Conference on Knowledge Discovery and Data Mining (KDD), 2023. (CF)

69. **A dataset for learning university STEM courses at scale and generating questions at a human level**
Iddo Drori, Sarah Zhang, Zad Chin, Reece Shuttleworth, Albert Lu, Linda Chen, Bereket Birbo, Michele He, Pedro Lantigua, Sunny Tran, Gregory Hunter, Bo Feng, Newman Cheng, Roman Wang, Yann Hicke, Saisamrit Surbehera, Arvind Raghavan, Alexander Siemenn, Nikhil Singh, Avi Shporer, Jayson Lynch, Nakul Verma, Tonio Buonassisi, Armand Solar-Lezama
Educational Advances in Artificial Intelligence (EAAI), 2023. (CF)

68. **Text to graphics by program synthesis with error correction**
Ivan Nikitovic, Trisha Anil, Showndarya Madhavan, Arvind Raghavan, Zad Chin, Alexander E. Siemenn, Saisamrit Surbehera, Yann Hicke, Edward Chien, Ori Kerret, Tonio Buonassisi, Armando Solar-Lezama, **Iddo Drori**
CVPR Generative Models for Computer Vision Workshop (GCV), 2023. (WS)

67. **A neural network solves, explains, and generates university math problems by program synthesis and few-shot learning at human level**
Iddo Drori, Sunny Tran, Roman Wang, Kevin Liu, Newman Cheng, Leonard Tang, Elizabeth Ke, Nikhil Singh, Taylor Patti, Jayson Lynch, Avi Shporer, Nakul Verma, Eugene Wu, Gilbert Strang
Proceedings of the National Academy of Sciences (PNAS), 119 (32), 2022. (JR)

66. **Tracking blobs on the turbulent edge of plasma in Tokamak fusion reactors**
Woonghee Han, Randall Pietersen, Rafael Villamor Lora, Matthew Beveridge, Nicola Offeddu, Theodore Golfinopoulos, Christian Theiler, Jim Terry, Earl Marmar, **Iddo Drori**
Nature Scientific Reports, 12 (18142), 2022. (JR)

65. **A machine learning and computer vision approach to rapidly optimize multiscale droplet generation**
Alexander Siemenn, Evyatar Shaulsky, Matthew Beveridge, Tonio Buonassisi, Sara Hashmi, **Iddo Drori**
ACS Applied Materials & Interfaces, 14 (3), 4668—4679, 2022. (JR)

64. **Solving Probability and Statistics problems by probabilistic program synthesis at human level and predicting solvability**
Leonard Tang, Elizabeth Ke, Nikhil Singh, Nakul Verma, **Iddo Drori**
International Conference on Artificial Intelligence in Education (AIED), 2022. (CF)

63. **Human evaluation of text-to-image models on a multi-task benchmark**
Vitali Petsiuk, Alexander Siemenn, Saisamrit Surbehera, Zad Chin, Kieth Tyser, Gregory Hunter, Arvind Raghavan, Yann Hicke, Bryan Plummer, Ori Kerret, Tonio Buonassisi, Kate Saenko, Armando Solar-Lezama, **Iddo Drori**
NeurIPS Workshop on Human Evaluation of Generative Models (HEGM), 2022. (WS)

62. **InterDocker: End-to-end cross-attentive and geometric Transformers for efficient iterative protein docking**
Allan Dos Santos Costa, Manvitha Ponnapati, Eric Alcaide, Kalyan Palepu, Suhaas M Bhat, Pranam Chaterjee, Joseph Jacobson, **Iddo Drori**
NeurIPS Workshop on Learning Meaningful Representations of Life (LMRL), 2022. (WS)

61. **Generalizing imaging through scattering media with uncertainty estimates**
Jared Cochrane, Matthew Beveridge, **Iddo Drori**
WACV Workshop on Applications of Computational Imaging, 2022. (WS)

60. **Language aware zero-shot AutoML**
Nikhil Singh, Brandon Kates, Jeff Mentch, Anant Kharkar, Madeleine Udell, **Iddo Drori**
Technical Report, 2021. (TR)

59. **Solving Linear Algebra by program synthesis**
Iddo Drori, Nakul Verma
Technical Report, 2021. (TR)

58. **Image2Lego: Customized LEGO® set generation from images**
Kyle Lennon, Katharina Fransen, Alexander O'Brien, Yamin Arefeen, Matthew Beveridge, Melody Cao, Nikhil Singh, **Iddo Drori**
Technical Report, 2021. (TR)

57. **Solving machine learning problems**
Sunny Tran, Ishan Pakuwal, Pranav Krishna, Prabhakar Kafle, Nikhil Singh, Jayson Lynch, **Iddo Drori**
Asian Conference on Machine Learning (ACML), 2021. (CF)
Best paper award winner

56. **Solving the Families in the Wild kinship verification challenge by program synthesis**
Junyi Huang, Maxwell Strome, Ian Jenkins, Parker Williams, Bo Feng, Yaning Wang, Vaibhav Bagri, Newman Cheng, **Iddo Drori**
IEEE International Conference on Automatic Face and Gesture Recognition (FG), 2021. (CF)
Competition winner

55. **Image2Reverb: Cross-modal reverb impulse response synthesis**
Nikhil Singh, Jeff Mentch, Jerry Ng, Matthew Beveridge, **Iddo Drori**
International Conference on Computer Vision (ICCV), 2021. (CF)

54. **Pedestrian wind factor estimation in complex urban environments**
Sarah Mokhtar, Matthew Beveridge, Melody Cao, **Iddo Drori**
Asian Conference on Machine Learning (ACML), 2021. (CF)

53. **Exploring the edge/SOL fluctuations in negative triangularity plasmas on TCV**
Woonghee Han, Nicola Offeddu, Theodore Golfinopoulos, Christian Theiler, Cedric Tsui, Jose Boedo, Jim Terry, Earl Marmar, Randall Pietersen, Rafael Villamor Lora, Matthew Beveridge, **Iddo Drori**
63rd Annual Meeting of the American Physical Society Division of Plasma Physics, 2021. (CF)

52. **SARS-CoV-2 protein docking**
Iddo Drori, Manvitha Ponnapati, Allan Costa, Amanda Beck, Daniel Goodwin, Anant Kharkar, Jérôme Tubiana, Dina Schneidman, Haim Wolfson
Critical Assessment of PRediction of Interactions (CAPRI) COVID-19 Open Science Initiative Participants, 2021. (CF)

51. **Meta learning**
Iddo Drori and Joaquin Vanschoren
AAAI Conference on Artificial Intelligence, 2021. (TL)

50. **Top 3 in FG 2021 Families in the Wild kinship verification challenge**
Junyi Huang, Maxwell Strome, Ian Jenkins, Parker Williams, Bo Feng, Yaning Wang, Vaibhav Bagri, Newman Cheng, **Iddo Drori**
Families in the Wild Kinship Verification Challenge, 2021. (WS)
Competition winner

49. **Quantifying and alleviating distribution shifts in foundation models on review classification**
Sehaj Chawla, Nikhil Singh, **Iddo Drori**
NeurIPS Workshop on Distribution Shifts: Connecting Methods and Applications, 2021. (WS)

48. **End-to-end cross-attentive and geometric Transformers for efficient iterative protein docking**
Allan Costa, Manvitha Ponnapati, Kalyan Palepu, Suhaas Bhat, Eric Alcaide, Joseph M. Jacobson, Pranam Chatterjee, **Iddo Drori**
NeurIPS Workshop on Learning Meaningful Representations of Life (LMRL), 2021. (WS)

47. **Predicting critical biogeochemistry of the Southern Ocean for climate monitoring**
Ellen Park, Jae Deok Kim, Nadege Aoki, Melody Cao, Yamin Arefeen, Matthew Beveridge, David Nicholson, **Iddo Drori**
NeurIPS Workshop on Tackling Climate Change with Machine Learning (CCAI), 2021. (WS)

46. **Predicting the Atlantic multidecadal variability**
Glenn Liu, Peidong Wang, Matthew Beveridge, Young-Oh Kwo, **Iddo Drori**
NeurIPS Workshop on Tackling Climate Change with Machine Learning (CCAI), 2021. (WS)
Best paper award winner

45. **Artificial intelligence enhances enhances control parameter space investigation in flow-focusing droplet generation**
Evyatar Shaulsky, Alexander Siemenn, Matthew Beveridge, Tonio Buonassisi, **Iddo Drori**, Sara Hashmi
95th ACS Colloid and Surface Science Symposium, 2021. (WS)

44. **Deep variational inference**
Iddo Drori
Handbook of Variational Methods for Nonlinear Geometric Data
Editors Philipp Grohs, Martin Holler and Andreas Weinmann
Springer, 2020. (BC)

43. **Variational objectives for Markovian dynamics with backward simulation**
Antonio Moretti, Zizhao Wang, Luhuan Wu, **Iddo Drori**, Itsik Pe'er
European Conference on Artificial Intelligence (ECAI), 2020. (CF)

42. **Learning to solve combinatorial optimization problems on real-world graphs in linear time**
Iddo Drori, Anant Kharkar, William R. Sickinger, Brandon Kates, Qiang Ma, Suwen Ge, Eden Dolev, Brenda Dietrich, David P. Williamson, Madeleine Udell
IEEE International Conference on Machine Learning and Applications, 2020. (CF)

41. **Morphing semi-supervised protein structures predicted using distance and torsion representations with deep graph ranking**
Iddo Drori, Jessie Ji, Zining Fan, Anant Kharkar
Critical Assessment of Techniques for Protein Structure Prediction (CASP) 14th Community Wide Experiment, 2020. (CF)

40. **Galaxy TSP: A new billion node benchmark for TSP**
Iddo Drori, Brandon Kates, William R. Sickinger, Anant Kharkar, Brenda Dietrich, Avi Shporer, Madeleine Udell
NeurIPS Workshop on Learning Meets Combinatorial Algorithms, 2020. (WS)

39. **Vehicle trajectory prediction by transfer learning of semi-supervised models**
Nick Lamm, Malavika Srikanth, Shashank Jaiprakash, **Iddo Drori**
NeurIPS Workshop on Machine Learning for Autonomous Driving, 2020. (WS)

38. **Trajectograms: Which semi-supervised trajectory prediction model to use?**
Nick Lamm, Malavika Srikanth, Shashank Jaiprakash, **Iddo Drori**
ICML Workshop on AI for Autonomous Driving, 2020. (WS)

37. **Zero-shot AutoML**
Iddo Drori, Lu Liu, Qiang Ma, Brandon Kates, Madeleine Udell
Annual Machine Learning Symposium, 2020. (WS)

36. **High-quality real-time structured debate generation**
Niles Christensen, Eric Bolton, Alex Calderwood, **Iddo Drori**
Annual Machine Learning Symposium, 2020. (WS)

35. **Realistic real-time voice swapping from single unpaired sentences**
Carlo Provinciali, Junghoo Kim, Yihong Liu, **Iddo Drori**
International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020. (DM)

34. **Combinatorial optimization by graph pointer networks and hierarchical reinforcement learning**
Qiang Ma, Suwen Ge, Danyang He, Darshan Thaker, **Iddo Drori**
AAAI Workshop on Deep Learning on Graphs, 2020. (WS)
Spotlight

33. **Accurate protein structure prediction by embeddings and deep learning representations**
Iddo Drori, Darshan Thaker, Arjun Srivatsa, Daniel Jeong, Yueqi Wang, Linyong Nan, Fan Wu, Dimitri Leggas, Jinhao Lei, Weiyi Lu, Weilong Fu, Yuan Gao, Sashank Karri, Annand Kannan, Antonio Moretti, Chen Keasar, Itsik Pe'er
Machine Learning in Computational Biology, 2019. (CF)

32. **Assessing the ability of CNNs to detect Glaucoma from OCT probability maps**
Kaveri A. Thakoor, Qian Zheng, Linyong Nan, Xinhui Li, Emmanouill Tsamis, Isht Dwivedi, **Iddo Drori**, Paul Sajda, Donald C. Hood
The Association for Research in Vision and Ophthalmology
ARVO Annual Meeting, 2019. (CF)

31. **Automatic machine learning by pipeline synthesis using model-based reinforcement learning and a grammar**
Iddo Drori, Yamuna Krishnamurthy, Raoni de Paula Lourenco, Remi Rampin, Kyunghyun Cho, Claudio Silva, Juliana Freire
ICML Workshop on Automated Machine Learning, 2019. (WS)

30. **Winning the ICCV 2019 Learning to Drive Challenge**
Michael Diodato, Yu Li, Manik Goyal, **Iddo Drori**
ICCV Autonomous Driving Workshop, 2019. (WS)
Competition winner

29. **Using segmentation masks in the ICCV 2019 Learning to Drive Challenge**
Antonia Lovjer, Minsu Yeom, Benedikt Schifferer, **Iddo Drori**
ICCV Autonomous Driving Workshop, 2019. (WS)
Competition winner

28. **AutoML using metadata language embeddings**
Iddo Drori, Lu Liu, Sharath Koorathota, Nian Yi, Jie Li, Antonio Khalil Moretti, Juliana Freire, Madeleine Udell
NeurIPS Workshop on Meta-Learning, 2019. (WS)

27. **Protein structure prediction with deep learning representations**
Iddo Drori, Darshan Thaker, Arjun Srivatsa, Daniel Jeong, Yueqi Wang, Linyong Nan, Fan Wu, Dimitri Leggas, Jinhao Lei, Weiyi Lu, Weilong Fu, Yuan Gao, Sashank Karri, Anand Kannan, Antonio Khalil Moretti, Chen Keasar, Itsik Pe'er
NeurIPS Workshop on Learning Meaningful Representations of Life, 2019. (WS)

26. **Prose for a painting**
Prerna Kashyap, Samrat Phatale, **Iddo Drori**
ICCV Workshop on Closing the Loop Between Vision and Language, 2019. (WS)

25. **Visual natural language query auto-completion for estimating instance probabilities**
Samuel Sharpe, Jin Yan, Fan Wu, **Iddo Drori**
CVPR Language and Vision Workshop, 2019. (WS)

24. **Training poisoning in imperfect information games**
Guy Aridor, Natania Wolansky, Jisha Jacob, **Iddo Drori**
Annual Machine Learning Symposium, 2019. (WS)

23. **AlphaD3M: Machine learning pipeline synthesis**
Iddo Drori, Yamuna Krishnamurthy, Remi Rampin, Raoni de Paula Lourenco, Jorge Piazentin Ono, Kyunghyun Cho, Claudio Silva, Juliana Freire
ICML International Workshop on Automated Machine Learning, 2018. (WS)
Oral

22. **High quality protein Q8 secondary structure prediction by diverse neural network architectures**
Iddo Drori, Isht Dwivedi, Pranav Shrestha, Jeffrey Wan, Yueqi Wang, Yunchu He, Anthony Mazza, Hugh Krogh-Freeman, Dimitri Leggas, Kendal Sandridge, Chinmay Joshi, Sonam Goenka, Linyong Nan, Kaveri Thakoor, Chen Keasar, Itsik Pe'er
NeurIPS Workshop on Machine Learning for Molecules and Materials, 2018. (WS)

21. **Explainable musical phrase completion**
Gregory W. Johnsen, Ling Lin, Lucia Yu, Andrew Dempsey, Vishwali Mhasawade, Daniel Jaroslawicz, **Iddo Drori**
ICML Joint Workshop on Machine Learning for Music, 2018. (WS)

20. **Deep mutual information**
Andrew Stirn, Robert Kwiatkowski, **Iddo Drori**
Annual Machine Learning Symposium, 2018. (WS)

19. **Sparse solution of underdetermined systems of linear equations by stagewise orthogonal matching pursuit**
David L. Donoho, Yaakov Tsaig, **Iddo Drori**, Jean L. Starck
IEEE Transactions on Information Theory, 58 (2), 1094-1121, 2012. (JR)

18. **Compressed video sensing**
Iddo Drori
BMVA Symposium on 3D Video-Analysis, Display, and Applications, 2008. (WS)

17. **Fast l1 minimization by iterative thresholding for multidimensional NMR spectroscopy**
Iddo Drori
EURASIP Journal on Advances in Signal Processing 2007 (1), 2007. (JR)

16. **Virtual Northern analysis of the human genome**
Evan H. Hurowitz, **Iddo Drori**, Victoria C. Stodden, David L. Donoho, Patrick O. Brown
PLoS One 2 (5), 2007. (JR)

15. **Error prevention in random linear codes by iterative reweighted least squares**
Iddo Drori
Technical Report, 2007. (TR)

14. **Solution of l1 minimization problems by LARS/homotopy methods**
Iddo Drori and David L. Donoho
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2006. (CF)

13. **Fast l1 minimization for genomewide analysis of mRNA lengths**
Iddo Drori, Victoria C. Stodden, Evan H. Hurowitz
Genomic Signal Processing and Statistics (GENSIPS), 2006. (CF)

12. **Multiscale representations for manifold-valued data**
Inam Ur Rahman, **Iddo Drori**, Victoria C. Stodden, David L. Donoho, Peter Schroder
SIAM Journal on Multiscale Modeling and Simulation, 4 (4), 1201-1232, 2005. (JR)

11. **Video operations in the gradient domain**
Iddo Drori, Tommer Leyvand, Shachar Fleishman, Daniel Cohen-Or, Hezy Yeshurun
Technical Report, 2004. (TR)

10. **Example-based rendering**
Iddo Drori, PhD, outstanding doctoral award
Tel-Aviv University, 2004. (TS)

9. **Interactive object segmentation in video by fitting splines to graph cuts**
Iddo Drori, Tommer Leyvand, Daniel Cohen-Or, Hezy Yeshurun
ACM SIGGRAPH, Posters Session, 2004. (CF)

8. **Spectral sound gap filling**
Iddo Drori, Alon Fishbach, Hezy Yeshurun
Proceeding of International Conference on Pattern Recognition, 871-874, 2004. (CF)

7. **Fragment-based image completion**
Iddo Drori, Daniel Cohen-Or, Hezy Yeshurun
ACM Transactions on Graphics 22 (3), SIGGRAPH, 303-312, 2003. (JR)

6. **Bilateral mesh denoising**
Shachar Fleishman, **Iddo Drori**, Daniel Cohen-Or
ACM Transactions on Graphics 22 (3), SIGGRAPH, 950-953, 2003. (JR)

5. **Fast multiresolution image operations in the wavelet domain**
Iddo Drori and Dani Lischinski
IEEE Transactions on Visualization and Computer Graphics, 9 (3), 395-411, 2003. (JR)
TVCG Journal Cover

4. **Example-based style synthesis**
Iddo Drori, Daniel Cohen-Or, Hezy Yeshurun
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2003. (CF)
CVPR Proceedings Back Cover

3. **Image operations in the wavelet domain**
Iddo Drori, MSc, Magna Cum Laude
Hebrew University of Jerusalem, 2000. (TS)

2. **Wavelet warping**
Iddo Drori and Dani Lischinski
Eurographics Rendering Techniques, 113-124, 2000. (CF)

1. **Contact analysis of spatial fixed-axes pairs using configuration spaces**
Iddo Drori, Leo Joskowicz, Elisha Sacks
IEEE International Conference on Robotics and Automation (ICRA), 578-584, 1999. (CF)

Selected Invited Talks and Panels

- **Interview2Paper: Human oversight of self-improving AI researchers**
HHMI Janelia Research Campus, June, 2025
- **Test-time adaptation of foundation models**
JPMorgan Chase, June, 2025
- **AI for solving the IMO at a gold medal level**
NVIDIA, May, 2025
- **AI innovators, startups, and organizations**
YPO/Harvard Presidents' Program, hosted by SUNY, May, 2025
- **Diverse inference and verification for advanced reasoning**
Yeshiva University, Department of Computer Science & Engineering, February, 2025
University of Tennessee, Knoxville, EECS, February, 2025
University of Birmingham, School of Computer Science, February, 2025
- **AI generated classes**
Massachusetts Institute of Technology, Faculty Seminar, February, 2023
Columbia University, Senate, January, 2023
- **Learning to learn courses**
MIT-CalTech-UPenn-Stanford, NeuroSym Seminar, July 2022
Boston University, Department of Computer Science, April 2022
McMaster University, Distinguished Lecture Series, Computing & Software, March, 2022
Massachusetts Institute of Technology, March 2022
Harvard University, Center of Mathematical Sciences and Applications, March 2022.
Cornell University, Department of Computer Science, February, 2022.
Worcester Polytechnic Institute, Computer Science Department, January 2022.
Illinois Institute of Technology, Department of Computer Science, January 2022.
Bar Ilan University, Israel, August 2021.
Massachusetts Institute of Technology, $\tau\beta\pi$, Da Vinci Lecture, February, 2021.
- **SARS-CoV-2 proteins structure prediction**
Massachusetts Institute of Technology, Department of EE and Computer Science.
Columbia University, Zuckerman Institute, COVID-19 Virtual Symposium.
Tel-Aviv University, School of Computer Science, Structural Bioinformatics seminar.
April 2020
- **The science of deep learning**
Carnegie Mellon University, Department of Machine Learning, March 2019.
- **Learning deep learning**
Columbia University, Department of Computer Science, February 2019.
- **Automated machine learning for medical imaging**
Columbia University, Data Science Institute, workshop, February 2019.
- **Automated machine learning**
Tel Aviv University, January 2019.
- **AlphaX: Generalizing AlphaZero**
Ben-Gurion University, Department of Computer Science, CS seminar, January 2019.

- **Automated machine learning**
  International Workshop on Automatic Machine Learning, ICML, July 2018.
  Panel member with Chelsea Finn, Roman Garnett, Isabelle Guyon, Frank Hutter, Luc de Raedt, Joaquin Vanschoren
- **Adaptive dual process theory, neural network architectures, and applications**
  NYU, Center for Data Science, data science seminar, April 2018.
- **Visual task recommendation**
  Tel Aviv University, Institute for Internet Studies, May 2017.
- **Sparse solution of underdetermined systems of equations**
  Ben-Gurion University, Department of Computer Science, CS seminar, February 2007.
  Hebrew University of Jerusalem, Dept. of Statistics, statistics seminar, November 2006.
- **Fast $\ell 1$ minimization**
  Stanford University, Department of Statistics, statistics seminar, July 2006.
- **Iterative thresholding for rapid sparse solution of underdetermined linear systems**
  Stanford University, ICME, linear algebra and optimization seminar, September 2005.
- **Multi-scale representations for manifold valued data**
  Technion, Faculty of Industrial Engineering, statistics seminar, March 2007.
  Weizmann Institute, Vision and Robotics seminar, August 2005.
- **Video operations in the gradient domain**
  MIT, CSAIL, graphics meeting, August 2004.
- **Spectral sound gap filling**
  Weizmann Institute, Vision and Robotics seminar, June 2004.
- **Gradient video compositing, matting and completion**
  Hebrew University of Jerusalem, Computer Vision seminar, May 2004.
  Technion - Tel Aviv University, 3rd Workshop on Geometric Computing, May 2004.
  Tel-Aviv University, Israel SIGGRAPH Chapter meeting, November 2003.
- **Example and fragment-based image completion**
  Technion - Tel Aviv University, 2nd Workshop on Geometric Computing, May 2003.
  Weizmann Institute, Vision and Robotics seminar, June 2003.
  The Interdisciplinary Center, Israel SIGGRAPH Chapter meeting, November 2002.
- **Example-based style synthesis**
  Weizmann Institute, Vision and Robotics seminar, April 2002.
- **Example-based rendering**
  Weizmann Institute, Computer Vision annual seminar, December 2001.
  Tel Aviv University, Center of Geometric Computing, October 2001.
- **Fast multi-resolution image operations in the wavelet domain**
  Tel Aviv University, Israel SIGGRAPH Chapter meeting, February 2000.

Participation and Training

International Mathematical Olympiad (IMO):
Solving IMO problems with AI, Sunshine Coast, Australia, 2025
MIT and Columbia University: IRB social-behavioral research training
ASSC: The association for the scientific study of consciousness
Stanford University: Responsible conduct of research training
Stanford University: Teaching and course design
Berkeley, MSRI: Mathematical computational and statistical image analysis
UCLA, IPAM: Multi-scale structures in analysis of high dimensional data

Awards and scholarships

- **International Mathematical Olympiad (IMO): AI X Prize**
  Silver medal, 2024
- **Abstraction and Reasoning Corpus (ARC) Prize Competition**
  Silver medal, 2024
- **NeurIPS open-ended learning competitions**
  MineRL BASALT and Neural MMO, 2022
- **CCAI NeurIPS Best Paper Award Winner**, 2021
- **FG Competition Winner, Kinship Verification Challenge**, 2021
- **ACML Best Student Paper Award Winner**, 2021
- **ICCV Competition Winner, Learning to Drive Challenge**, 2019
- **Tel Aviv University** Teaching excellence award for highest student surveys, 2017
- **Colman** Award for mentoring best student capstone projects, 2017
- **Tel Aviv University** The annual prize in Computer Science, 2003
- **Tel Aviv University** Vatat scholarship for outstanding PhD students, 2001-2004
- **Tel Aviv University** Research excellence scholarship, 2001
- **Hebrew University** Research scholarship in M.Sc. studies, 1998-1999
- **Hebrew University Amirim** excellence program scholarship (top 2%), 1994-1997

Grants Accepted

- **Google** educational grants, 2021–2023
- **Google** cloud grant for learning to learn Math in Computer Science, 2021
- **Microsoft** Azure grant for efficiently cleaning up low earth orbit, 2021
  Cornell University Center for Data Science for Enterprise & Society, 2021
- **Google** COVID-19 research cloud grant, 2020
- **Tel Aviv Unviersity** Research grant, Coller Foundation, 2017

Press

- The Daily Free Press, This year's Nobel Prizes point to artificial intelligence's role in future of scientific research, 2024
- MIT News, New algorithm aces university math course questions, 2022
- MIT News, Machine learning facilitates turbulence tracking in fusion reactors, 2022
- Boston University News, Students win two NeurIPS competitions, 2022
- Columbia University News, Team wins top 3 in FG kinship verification challenge, 2021
- Columbia University News, CS Team Wins the ICCV learning-to-drive challenge, 2019
- New York University News, Automatic machine learning: Learning how to learn, 2019

Citations

7,000+ on Google Scholar.

Extracurricular Activities

Flight training: Student pilot 2020-2024, toward private pilot certificate 2025
Music: Juilliard extension courses, 2020, 2022
Triathlon: swimming, cycling, running, 11 races 2020 – present

Military Service	Computer Service Directorate, Captain in reserve, IDF, 1995 – 2015 Center of Encryption and Information Security, IDF, 1994 Graduated **1st in class in Officers Academy**, IDF, 1993 Air Crew Officer, Israeli Air Force, 1990 – 1992 Award: **1st in class in Flight Academy** studies, Israeli Air Force, 1991
Citizenship	Israeli US resident, extraordinary ability EB-1A greencard, authorized to work in the US, 2022-2032 US citizenship expected 2027