

# YANIV ROMANO

*Curriculum Vitae*

**Date:** 16 October 2025

## CONTACT INFORMATION

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Website: <https://sites.google.com/view/yaniv-romano>  
Google Scholar: [Link to Google Scholar Account](#)

## ACADEMIC DEGREES

- 2017 Ph.D. (Direct Track) in Electrical Engineering  
Technion – Israel Institute of Technology  
Advisor: Prof. Michael Elad
- 2014 M.Sc. in Electrical Engineering  
Technion – Israel Institute of Technology  
Advisor: Prof. Michael Elad
- 2012 B.Sc. in Electrical Engineering  
Technion – Israel Institute of Technology

## ACADEMIC APPOINTMENTS

- Aug 2025 – Present Associate Professor (Tenured)  
Department of Electrical and Computer Engineering  
Department of Computer Science  
Technion – Israel Institute of Technology
- 2021 – Aug 2025 Assistant Professor (Senior Lecturer)  
Department of Electrical and Computer Engineering  
Department of Computer Science  
Technion – Israel Institute of Technology
- 2018 – 2020 Postdoctoral Researcher  
Department of Statistics  
Stanford University  
Advisor: Prof. Emmanuel Candes

## PROFESSIONAL EXPERIENCE (outside academia)

- 2022 – Present Consultant: Quantum Machine Learning  
LightSolver LTD, Tel Aviv, Israel
- Summer 2015 Research Intern: Image Processing  
Google Research, Mountain View, California, USA  
Host: Dr. Peyman Milanfar

## FELLOWSHIPS, AWARDS, AND HONORS

2025	<b>Elected as a Member of the Israel Young Academy</b>
2025	<b>Elected as a Member of the Israel Statistical Association</b>
2024	<b>The Henry Taub Prize for Academic Excellence</b>
2024	<b>Krill Prize for Excellence in Scientific Research</b>
Winter 2023	<b>Technion's Excellence in Teaching Award</b> (top 12%) Machine Learning Course, ECE, Technion
Spring 2023	<b>Technion's Excellence in Teaching Award</b> (top 4%) Numerical Algorithms Course, CS, Technion
Winter 2022	<b>Technion's Excellence in Teaching Award</b> (top 4%) Machine Learning Course, ECE, Technion
2023 – 2024	<b>Career Advancement Fellow</b> TCE, Technion
2021 – 2023	<b>Leaders in Science and Technology, Career Advancement Chair Program</b> TCE, Technion
2021	<b>IEEE Signal Processing Society Best Paper Award</b>
2021	<b>Alon Fellowship</b>
2021	<b>Eric and Sheila Samson Prime Minister's Prize for Global Innovation in Smart Mobility and Alternative Fuels for Transportation: Researcher Recruitment Prize</b>
2020	<b>SIAG/IS Early Career Prize</b>
2019 – 2020	<b>Koret Postdoctoral Fellowship</b> Stanford University
2018 – 2020	<b>ISEF Foundation Postdoctoral Fellowship, International Fellow</b>
2018 – 2020	<b>Viterbi Postdoctoral Fellowship</b> Technion
2018 – 2020	<b>Zuckerman Postdoctoral Fellowship (Israeli Scholars in the U.S.)</b> Awarded to five recipients annually for exceptional research
2016 – 2017	<b>The Irwin and Joan Jacobs Scholarship</b> Technion
2016 – 2017	<b>The Andrew and Erna Finci Viterbi Scholarship</b> Technion
2014 – 2017	<b>Zeff Scholarship for Excellent Ph.D. Students</b> Technion

## RESEARCH GRANTS

### Competitive

- 2024 – 2029 **European Research Council (ERC) Starting Grant**  
1,500,000 Euro  
“SafetyBounds: Uniting Statistical Testing and Machine Learning for Safe Predictions”
- 2021 – 2025 **Israel Science Foundation (ISF)**  
200,000 NIS annually  
“Beyond Accuracy: Predictive Inference with Valid Confidence”

### Industrial and other sources

- 2022 – 2025 **The Technion Center for Machine Learning and Intelligent Systems (MLIS)**  
1,818,000 NIS  
“Model-Based Geometrical Neural Networks: Construction, Applications, and Theory”  
With Michael Elad and Alex Bronstein, CS, Technion.
- 2022 – 2024 **Verily Life Sciences LLC**  
43,500 US\$  
Unrestricted Research Award  
“Uncertainty Quantification in Machine Learning”
- 2021 – 2023 **Citi Bank**  
50,000 US\$  
Unrestricted Research Award  
“Reliable Machine Learning”
- 2020 **Zuckerman Fund for Interdisciplinary Research in Machine Learning and Artificial Intelligence, the Technion Center for Machine Learning and Intelligent Systems**  
25,000 US\$  
“Certifying Robustness of Modern Machine Learning”

## RESEARCH INTERESTS (briefly)

I study mathematical and statistical problems that arise in data science, focusing on when and how statistical inference and machine learning can empower each other. My research interests center around predictive uncertainty quantification, reproducibility in data-driven inference, statistical testing, interpretability, and robustness. Other interests include signal and image processing, as well as sparse modeling of data.

## TECHNOLOGY TRANSFER

**Image processing:** The technology I invented at Google, together with Dr. Peyman Milanfar, called [RAISR](#), was launched in 2017 and has been used in various Google products:

- [Pixel 2/XL Phones](#) for digital zoom.
- [Google Clips](#) for high-quality image export.
- [Google+](#) for bandwidth savings of *billions* of images per week.
- [Motion Stills Application](#) for high-quality video export.

**Uncertainty quantification:** The methodology I invented at Stanford University, together with Prof. Emmanuel Candes, called [CQR \(Conformalized Quantile Regression\)](#), was used by *The Washington Post* to estimate outstanding votes for the 2020 U.S. presidential election. This technology was further [enhanced](#) and applied in the 2024 U.S. presidential election.

## PUBLICATIONS

### Refereed papers in professional journals (supervised students are underlined>

**Y. Romano**, M. Protter, and M. Elad, "Single Image Interpolation via Adaptive Non-Local Sparsity-Based Modeling," in IEEE Transactions on Image Processing, vol. 23, no. 7, pp. 3085-3098, 2014.

**Y. Romano** and M. Elad, "Boosting of Image Denoising Algorithms," SIAM Journal on Imaging Sciences, vol. 8, no. 2, pp. 1187-1219, 2015.

**Y. Romano** and M. Elad, "Con-Patch: When a Patch Meets its Context," in IEEE Transactions on Image Processing, vol. 25, no. 9, pp. 3967-3978, 2016.

**Y. Romano**, J. Isidoro, and P. Milanfar, "RAISR: Rapid and Accurate Image Super Resolution," in IEEE Transactions on Computational Imaging, vol. 3, no. 1, pp. 110-125, 2017. **IEEE Signal Processing Society Best Paper Award.**

J. Sulam, **Y. Romano**, and R. Talmon, "Dynamical System Classification with Diffusion Embedding for ECG-Based Person Identification," Signal Processing, Elsevier, vol. 130, pp. 403-411, 2017.

Y. Ren, **Y. Romano**, and M. Elad, "Example-Based Image Synthesis via Randomized Patch-Matching," in IEEE Transactions on Image Processing, vol. 27, no. 1, pp. 220-235, 2017.

\* **Y. Romano**, M. Elad, and P. Milanfar, "The Little Engine that Could: Regularization by Denoising (RED)," SIAM Journal on Imaging Sciences, vol. 10, no. 4, pp. 1804-1844, 2017.

V. Pappyan<sup>‡</sup>, **Y. Romano**<sup>‡</sup>, and M. Elad, "Convolutional Neural Networks Analyzed via Convolutional Sparse Coding," Journal of Machine Learning Research (JMLR), vol. 18, no. 1, pp. 2887-2938, 2017.  
<sup>‡</sup>*Equal Contribution.*

J. Sulam, V. Pappyan, **Y. Romano**, and M. Elad, "Multi-Layer Convolutional Sparse Modeling: Pursuit and Dictionary Learning," in IEEE Transactions on Signal Processing, vol. 66, no. 15, pp. 4090-4104, 2018.

V. Pappyan, **Y. Romano**, J. Sulam, and M. Elad, "Theoretical Foundations of Deep Learning via Sparse Representations," in IEEE Signal Processing Magazine, vol. 35, no. 4, pp. 72-89, 2018.

T. Hong, **Y. Romano**, and M. Elad, "Acceleration of RED via Vector Extrapolation," Journal of Visual Communication and Image Representation, vol. 63, 2019.

A. Brifman, **Y. Romano**, and M. Elad, "Unified Single-Image and Video Super-Resolution via Denoising Algorithms," in IEEE Transactions on Image Processing, vol. 28, no. 12, pp. 6063-6076, 2019.

D. Simon, J. Sulam, **Y. Romano**, Y. Lue, and M. Elad, "MMSE Approximation for Sparse Coding Algorithms Using Stochastic Resonance," in IEEE Transactions on Signal Processing, vol. 67, no. 17, pp. 4597-4610, 2019.

**Y. Romano**<sup>‡</sup>, A. Averdarm<sup>‡</sup>, J. Sulam, and M. Elad, “Adversarial Noise Attacks of Deep Learning Architectures – Stability Analysis via Sparse Modeled Signals,” *Journal of Mathematical Imaging and Vision*, 2019. <sup>‡</sup>*Equal Contribution*.

**Y. Romano**<sup>‡</sup>, M. Sesia<sup>‡</sup>, and E. J. Candes, “Deep Knockoffs,” *Journal of the American Statistical Association (JASA)*, 2020. <sup>‡</sup>*Equal Contribution*.

**Y. Romano**, R. F. Barber, C. Sabatti, and E. J. Candes, “With Malice Toward None: Assessing Uncertainty via Equalized Coverage,” *Harvard Data Science Review*, 2020.

S. Li<sup>‡</sup>, M. Sesia<sup>‡</sup>, **Y. Romano**, E. J. Candes, and C. Sabatti, “Searching for Consistent Associations with a Multi-Environment Knockoff Filter,” *Biometrika*, vol. 109, no. 3, pp. 611-629, 2022. <sup>‡</sup>*Equal Contribution*.

S. Bates<sup>‡</sup>, E. J. Candes<sup>‡</sup>, L. Lei<sup>‡</sup>, **Y. Romano**<sup>‡</sup>, and M. Sesia<sup>‡</sup>, “Testing for Outliers with Conformal p-values,” *Annals of Statistics*, vol. 51, no. 1, pp. 149-178, 2023. <sup>‡</sup>*Authors listed alphabetically*.

S. Feldman, S. Bates, and **Y. Romano**, “Calibrated Multiple-Output Quantile Regression with Representation Learning,” *Journal of Machine Learning Research (JMLR)*, vol. 24, no. 24, pp. 1-48, 2023.

S. Shaer and **Y. Romano**, “Learning to Increase the Power of Conditional Randomization Tests,” *Machine Learning*, Springer, 2023.

S. Feldman, L. Ringel, S. Bates, and **Y. Romano**, “Achieving Risk Control in Online Learning Settings,” *Transactions on Machine Learning Research*, 2023.

G. Segal<sup>‡</sup>, N. Keidar<sup>‡</sup>, R. M. Lotan<sup>‡</sup>, **Y. Romano**, M. Herskovitz, and Y. Yaniv, “Utilizing Risk-Controlling Prediction Calibration to Reduce False Alarm Rates in Epileptic Seizure Prediction,” *Frontiers in Neuroscience*, vol. 17, 2023. <sup>‡</sup>*Equal Contribution*.

J. Teneggi<sup>‡</sup>, B. Bharti<sup>‡</sup>, **Y. Romano**, and J. Sulam, “SHAP-XRT: The Shapley Value Meets Conditional Independence Testing,” *Transactions on Machine Learning Research*, 2023. <sup>‡</sup>*Equal Contribution*.

**Y. Romano**<sup>‡</sup>, H. Primack<sup>‡</sup>, T. Vaknin<sup>‡</sup>, I. Meirzada, I. Karpas, D. Furman, C. Tradonsky, and R. Ben Shlomi, “Quantum Sparse Coding,” *Quantum Machine Intelligence*, vol. 6, no. 4, 2024. <sup>‡</sup>*Equal Contribution*.

O. Belhasin, **Y. Romano**, D. Freedman, E. Rivlin, and M. Elad, “Principal Uncertainty Quantification with Spatial Correlation for Image Restoration Problems,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 46, no. 5, pp. 3321-3333, 2024.

N. Goldenstein, J. Sulam, and **Y. Romano**, “Pivotal Auto-Encoder via Self-Normalizing ReLU,” *IEEE Transactions on Signal Processing*, vol. 72, pp. 3201-3212, 2024.

B. Einbinder<sup>‡</sup>, S. Feldman<sup>‡</sup>, S. Bates, A. N. Angelopoulos, A. Gendler, and **Y. Romano**, “Label Noise Robustness of Conformal Prediction,” *Journal of Machine Learning Research (JMLR)*, vol. 25, no. 328, pp. 1-66, 2024. <sup>‡</sup>*Equal Contribution*.

B. Einbinder, L. Ringel, and **Y. Romano**, “Semi-Supervised Risk Control via Prediction-Powered Inference,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2025. *To appear*.

**Refereed papers in conference proceedings (supervised students are underlined)**

**Y. Romano** and M. Elad, "Improving K-SVD Denoising by Post-Processing its Method-Noise," in IEEE International Conference on Image Processing (ICIP), 2013.

**Y. Romano** and M. Elad, "Patch-Disagreement as a Way to Improve K-SVD Denoising," in IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2015.

A. Brifman, **Y. Romano**, and M. Elad, "Turning a Denoiser into a Super-Resolver using Plug and Play Priors," in IEEE International Conference on Image Processing (ICIP), 2016.

J. Sulam<sup>‡</sup>, **Y. Romano**<sup>‡</sup>, and M. Elad, "Gaussian Mixture Diffusion," in IEEE International Conference on the Science of Electrical Engineering, 2016. <sup>‡</sup>*Equal Contribution*.

V. Pappas, **Y. Romano**, J. Sulam, and M. Elad, "Convolutional Dictionary Learning via Local Processing," in IEEE International Conference on Computer Vision (ICCV), 2017. Spotlight.

**Y. Romano**, M. Elad, and P. Milanfar, "RED-UCATION: A Novel CNN Architecture Based on Denoising Nonlinearities," in IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2018.

J. Sulam, V. Pappas, **Y. Romano**, and M. Elad, "Projecting onto the Multi-Layer Convolutional Sparse Coding Model," in IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2018.

S. R. Peled, **Y. Romano**, and M. Elad, "SOS Boosting for Image Deblurring Algorithms," in European Signal Processing Conference (EUSIPCO), 2019.

\* **Y. Romano**, E. Patterson, and E. J. Candes, "Conformalized Quantile Regression," in Advances in Neural Information Processing Systems (NeurIPS), 2019.

\* **Y. Romano**<sup>‡</sup>, M. Sesia<sup>‡</sup>, and E. J. Candes, "Classification with Valid and Adaptive Coverage," Advances in Neural Information Processing Systems (NeurIPS), 2020. Spotlight. <sup>‡</sup>*Equal Contribution*.

**Y. Romano**, S. Bates, and E. J. Candes, "Achieving Equalized Odds by Resampling Sensitive Attributes," Advances in Neural Information Processing Systems (NeurIPS), 2020.

M. Sesia and **Y. Romano**, "Conformal Prediction using Conditional Histograms", Advances in Neural Information Processing Systems (NeurIPS), 2021. Spotlight.

S. Feldman, S. Bates, and **Y. Romano**, "Improving Conditional Coverage via Orthogonal Quantile Regression," Advances in Neural Information Processing Systems (NeurIPS), 2021.

A. Gendler, T. Weng, L. Daniel, and **Y. Romano**, "Adversarially Robust Conformal Prediction," International Conference on Learning Representations (ICLR), 2022.

A. N. Angelopoulos<sup>‡</sup>, A. P. Kohli<sup>‡</sup>, S. Bates, M. I. Jordan, J. Malik, T. Alshaabi, S. Upadhyayula, and **Y. Romano**, "Image-to-Image Regression with Distribution-Free Uncertainty Quantification and Applications in Imaging," International Conference on Machine Learning (ICML), 2022. <sup>‡</sup>*Equal Contribution*.

N. Fingerhut, M. Sesia, and **Y. Romano**, "Coordinated Double Machine Learning," International Conference on Machine Learning (ICML), 2022.

M. Scetbon<sup>‡</sup>, L. Meunier<sup>‡</sup>, and **Y. Romano**, “An Asymptotic Test for Conditional Independence using Analytic Kernel Embeddings,” International Conference on Machine Learning (ICML), 2022. <sup>‡</sup>*Equal Contribution*.

B. Einbinder<sup>‡</sup>, **Y. Romano**<sup>‡</sup>, M. Sesia<sup>‡</sup>, and Y. Zhou<sup>‡</sup>, “Training Uncertainty-Aware Classifiers with Conformalized Deep Learning,” Advances in Neural Information Processing Systems (NeurIPS), 2022. <sup>‡</sup>*Authors listed alphabetically*.

S. Sankaranarayanan, A. N. Angelopoulos, S. Bates, **Y. Romano**, P. Isola “Semantic Uncertainty Intervals for Disentangled Latent Spaces,” Advances in Neural Information Processing Systems (NeurIPS), 2022.

A. A. Rosenberg<sup>‡</sup>, S. Vedula<sup>‡</sup>, **Y. Romano**, and A. M. Bronstein, “Fast Nonlinear Vector Quantile Regression,” International Conference on Learning Representations (ICLR), 2023. <sup>‡</sup>*Equal Contribution*.

\* S. Shaer<sup>‡</sup>, G. Maman<sup>‡</sup>, and **Y. Romano**, “Model-X Sequential Testing for Conditional Independence via Testing by Betting,” International Conference on Artificial Intelligence and Statistics (AISTATS), 2023. <sup>‡</sup>*Equal Contribution*.

M. Zaffran, A. Dieuleveut, J. Josse, **Y. Romano**, “Conformal Prediction with Missing Values,” International Conference on Machine Learning (ICML), 2023.

M. Bashari<sup>‡</sup>, A. Epstein<sup>‡</sup>, **Y. Romano**<sup>‡</sup>, M. Sesia<sup>‡</sup>, “Derandomized Novelty Detection with FDR Control via Conformal E-values,” Advances in Neural Information Processing Systems (NeurIPS), 2023. <sup>‡</sup>*Authors listed alphabetically*.

G. Yan, **Y. Romano**, T.-W. Weng, “Provably Robust Conformal Prediction with Improved Efficiency,” International Conference on Learning Representations (ICLR), 2024.

L. Ringel, R. Cohen, D. Freedman, M. Elad, and **Y. Romano**, “Early Time Classification with Accumulated Accuracy Gap Control,” International Conference on Machine Learning (ICML), 2024.

S. Feldman and **Y. Romano**, “Robust Conformal Prediction Using Privileged Information,” Advances in Neural Information Processing Systems (NeurIPS), 2024.

Y. Bar<sup>‡</sup>, S. Shaer<sup>‡</sup>, and **Y. Romano**, “Protected Test-Time Adaptation via Online Entropy Matching: A Betting Approach,” Advances in Neural Information Processing Systems (NeurIPS), 2024. <sup>‡</sup>*Equal Contribution*.

H. Davidov, S. Feldman, G. Shamai, R. Kimmel, and **Y. Romano**, “Conformalized Survival Analysis for General Right-Censored Data,” International Conference on Learning Representations (ICLR), 2025.

S. Katz<sup>‡</sup>, L. Ringel<sup>‡</sup>, **Y. Romano**, Lior Wolf, “Segment-Based Attention Masking for GPTs,” Association for Computational Linguistics (ACL), 2025. <sup>‡</sup>*Equal Contribution*.

M. Bashari, M. Sesia, **Y. Romano**, “Robust Conformal Outlier Detection under Contaminated Reference Data,” International Conference on Machine Learning (ICML), 2025.

\* M. Bashari<sup>‡</sup>, R. M. Lotan<sup>‡</sup>, Y. Lee<sup>‡</sup>, E. Dobriban, and **Y. Romano**, “Synthetic-Powered Predictive Inference,” Advances in Neural Information Processing Systems (NeurIPS), 2025. <sup>‡</sup>*Equal Contribution*.

N. Shoham, R. Dorfman, S. Shaer, K. Y. Levy, and **Y. Romano**, “Prediction-Powered Semi-Supervised Learning with Online Power Tuning,” Advances in Neural Information Processing Systems (NeurIPS), 2025.

## **Chapters in books**

D. Batenkov, **Y. Romano**, and M. Elad, “On the Global-Local Dichotomy in Sparsity Modeling,” *Compressed Sensing and its Applications*, pp. 1-53, Birkhauser, Cham, 2017.

## **Theses**

**Y. Romano**, “Topics in Visual Data Reconstruction,” Ph.D. thesis, Technion – IIT, 2018.

## **Patents granted**

P. Milanfar and **Y. Romano**, “Image Upscaling,” US Patent 9,996,902, 2018.

## **Research reports and other publications**

**Y. Romano**, M. Elad, and P. Milanfar, “A Denoiser Can Do Much More than Just Clean Noise,” *SIAM news*, March 2021.

## **Preprints**

\* M. Bashari<sup>‡</sup>, Y. Lee<sup>‡</sup>, R. M. Lotan, E. Dobriban, and **Y. Romano**, “Statistical Inference Leveraging Synthetic Data with Distribution-Free Guarantees.” *Equal Contribution*.

M. Zaffran, J. Josse, **Y. Romano**, and A. Dieuleveut, “Predictive Uncertainty Quantification with Missing Covariates.”

S. Feldman, S. Bates, and **Y. Romano**, “Conformal Prediction with Corrupted Labels: Uncertain Imputation and Robust Re-weighting.”

H. Davidov, G. Freidkin, S. Feldman, and **Y. Romano**, “Calibrated Predictive Lower Bounds on Time-to-Unsafe-Sampling in LLMs.”

L. Ringel<sup>‡</sup>, E. Tolochinsky<sup>‡</sup>, and **Y. Romano**, “Learning a Continue-Thinking Token for Enhanced Test-Time Scaling.” *Equal Contribution*.

## **TALKS AND SEMINARS**

### **Keynote talks**

“Conformal Prediction is Robust to Label Noise,” Symposium on Conformal and Probabilistic Prediction with Applications (COPA), Cyprus, September 15, 2023.

“Uncertainty Quantification in Modern ML,” SEA AI, Haifa University, June 30, 2023.

### **Prize lectures**

“Regularization by Denoising [RED],” SIAM Activity Group on Imaging Science Early Career Prize Lecture (virtual), originally scheduled in Toronto, Ontario, Canada, July 10, 2020.

### **Invited talks**

“Statistics-Powered ML: Building trust and robustness in Black-Box Inference”

- NVIDIA, Tel Aviv, October 30, 2025.

- Hebrew University of Jerusalem, November 6, 2025.

“Reliability in Modern Learning Systems,” New-Tech Event, EXPO TLV, Israel, May 20, 2025.

“Statistics-Powered ML: Building Trust and Robustness in Black-Box Predictions”

- Bar Ilan University's Learning Club Seminar, January 27, 2025.
- Richard Samworth's Group Meeting, February 4, 2025.
- Statistics Seminar Series, Pompeu Fabra University, Barcelona, February 20, 2025.
- MINDS / CIS Seminar Series, Johns Hopkins University, Baltimore, MD, March 18, 2025.
- UPenn Optimization Seminar, University of Pennsylvania, Philadelphia, PA, March 20, 2025.
- Statistics Seminar, Tel Aviv University, April 29, 2025.
- Amazon's Video Prime Paper Club, Amazon Haifa, July 2, 2025.

“Robust Conformal Prediction Using Privileged Information,” SEEDS Conference, University of Southern California, January 10, 2025.

“From Gambling to Test-Time ML Robustification”

- SIAM – MDS24, Atlanta, Georgia, October 21, 2024.
- Rothchild Prize Symposium: breakout session in honor of Michael Elad, Jerusalem, September 19, 2024.

“Even computers don't always tell the truth: a polygraph for AI”

- Technion Knowledge Center for Innovation, Managers Forum for Innovation, Microsoft, Haifa, February 14, 2024.
- TECHNOVATION Annual Conference by DeMarker business newspaper, Technion, June 18, 2024.

“ML-Powered Outlier Detection: False Discovery Rate Control and Derandomization”

- ICSDS, Lisbon, Portugal, December 18, 2023.
- EcoSta Conference, Beijing, China, July 19, 2024. Virtual.

“Online Conditional Randomization Testing by Betting,” IMSI Workshop on Permutation and Causal Inference: Connections and Applications, Chicago, August 25, 2023.

“Conformal Prediction is Robust to Label Noise,” ISSI (virtual), March 29, 2023.

“Reliability in Modern Machine Learning,” AI and Beyond, Technion, Israel, March 2, 2023.

“Risk Control for Online Learning Models”

- Mathematics of Interpretable Machine Learning, SIAM MDS, San Diego, Sept. 30, 2022.
- CMStatistics, King's College, London, UK, December 18, 2022.
- BASP Frontiers conference, Villars-sur-Ollon, Switzerland, February 6, 2023.

“Uncertainty Quantification in Modern ML: Offline and Online Settings,” DELTA talk, UCL, London, June 14, 2022.

“A Tour of Conformal Prediction: Regression, Classification, and Equitable Treatment”

- Computation Imaging Seminar (virtual), Purdue University, Indiana, USA, March 1, 2022.
- Workshop on Statistical Machine Learning (virtual), UFSCar, Brazil, July 4, 2021.

“Thought Leadership Panel on Artificial Intelligence,” a discussion moderated by Prag Sharma, Global Head of Citi's Artificial Intelligence Center of Excellence, Citi Innovation Week, June 24, 2021.

“Reliability, Equity, and Reproducibility in Modern Machine Learning”

- University of California, San Diego, December 3, 2019.
- Hebrew University of Jerusalem, January 6 and 13, 2020.
- Technion – Israel Institute of Technology, January 7 and 16, 2020.
- Tel-Aviv University, January 9 and 15, 2020.
- Weizmann Institute of Science, January 12, 2020.
- University of Washington, January 21, 2020.
- New York University, January 28, 2020.
- Caltech, February 5, 2020.
- MIT, February 26, 2020.
- University of California, Berkeley, March 4, 2020.
- University of Southern California, March 25, 2020.

“Deep Knockoffs Machines for Replicable Selections”

- Joint Statistical Meeting (JSM), Denver, USA, July 27 - August 1, 2019. On behalf of Emmanuel Candes.
- IEEE Santa Clara Valley Information Society, Stanford, CA, March 20, 2019.
- Cape Analytics, Mountain View, CA, May 29, 2019.
- MURI Team Meeting, Imperial College London, UK, October 11-12, 2018.

“Classification Stability: From Shallow to Deep Sparse Models,” Canadian Mathematical Society, Winter Meeting, Vancouver, Canada, December 7-10, 2018

“A Quest for a Universal Model for Signals: From Sparsity to ConvNets”

- Seminar, Duke University, NC, July 18, 2017.
- Seminar, Montreal Institute for Learning Algorithms (MILA), Canada, August 24, 2017.

“The Little Engine that Could: Regularization by Denoising (RED),” SIAM Annual Meeting, Pittsburgh, Pennsylvania, August 24, 2017.

“Con-Patch: When a Patch Meets its Context,” Israel Computer Vision Day, Herzliya, Israel, April 17, 2016.

## TEACHING EXPERIENCE

2023 – Present **Machine Learning** (046195)

Department of Electrical and Computer Engineering, Technion

Role: Lecturer / Lecturer-in-charge

Level: Undergraduate and graduate

2022 – Present **Numerical Algorithms** (234125)

Department of Computer Science, Technion

Role: Lecturer / Lecturer-in-charge

Level: Undergraduate

2021 – Present **Reliability in Machine Learning** (236601 / 049100)

Department of Electrical and Computer Engineering, Technion

Department of Computer Science, Technion

Role: Lecturer-in-charge; I developed and designed the course

Level: Graduate

2017            **Massive Online Course (MOOC) on Sparse and Redundant Representations and their Applications in Signal and Image Processing** (236862)  
Department of Computer Science, Technion  
Role: Developed the course under the edX platform, with Prof. Michael Elad  
Level: Graduate

## GRADUATE STUDENTS

### PhD theses in progress

Elad Tolochinsky, 2025 – 2029 (est.), “Statistical methods for language models”

Liran Ringel, 2025 – 2028 (est.), “Uncertainty quantification for time series”

- Winner of the Fine Certificate of Excellence ('25)

Roy Maor Lotan, 2024 – 2027 (est.), “Inference with rejection choice of machine learning algorithms”

Meshi Bashari, 2024 – 2027 (est.), “Adaptive learning from semi-supervised data”

- Winner of the Boaz Porat Prize, Technion ('24)
- Winner of the Freud Scholarship, Technion ('25)

Bat-Sheva Einbinder, 2023 – 2026 (est.), “Informative individualized inference via uncertainty-aware learning and calibration”

- Winner of the Jacobs-Gottwirth Scholarship ('24)
- Winner of the Jacobs-Qualcomm Scholarship ('25)

Shai Feldman, 2023 – 2026 (est.), “New tools for instance-wise predictive uncertainty estimation in regression problems”

- Winner of the Jacobs-Gottwirth Certificate of Excellence ('24)
- Winner of the Jacobs Certificate of Excellence ('25)

Shalev Shaer, 2022 – 2025 (est.), “Novel data-driven methods for testing the significance of feature relevance”

- Winner of the Jacobs-Gottwirth Certificate of Excellence ('22)

### MSc theses in progress

Hen Davidov, 2023 – 2025 (est.), “Conformalized survival prediction for clinical decision making”

- Co-advised with Ron Kimmel, CS, Technion
- Winner of the Rhodes Scholarship ('25)

Noa Shoham, 2023 – 2025 (est.), “Prediction-Powered semi-supervised learning”

### Completed MSc theses

Liran Ringel, 2024, “Uncertainty quantification for time series”

- Transitioned to Direct Ph.D. Track

Yarin Bar, 2024, “Protected test-time adaptation via online entropy matching: A betting approach”

- Current Position: Cathalert

Roy Maor Lotan, 2024, "Inference with rejection choice of machine learning algorithms"

- [Winner of the Sherman Certificate of Excellence \('24\)](#)
- [Transitioned to Direct Ph.D. Track](#)

Meshi Bashari, 2024, "Adaptive learning from semi-supervised data"

- [Transitioned to Direct Ph.D. Track](#)

Nelson Goldenstein, 2023, "Robust convolutional sparse coding"

- [Graduated with Excellence](#)
- Current Position: Elite Intelligence Unit at IDF

Bat-Sheva Einbinder, 2023, "Fitting uncertainty-aware machine learning models"

- [Winner of the Boaz Porat Prize, Technion \('22\)](#)
- [Transitioned to Direct Ph.D. Track](#)

Shai Feldman, 2022, "New tools for instance-wise predictive uncertainty estimation in regression problems"

- [Winner of the Jacobs-Gottwirth Certificate of Excellence \('21\)](#)
- [Transitioned to Direct Ph.D. Track](#)

Shalev Shaer, 2022, "Novel data-driven methods for testing the significance of feature relevance"

- [Winner of the Boaz Porat Prize, Technion \('21\)](#)
- [Transitioned to Direct Ph.D. Track](#)

Asaf Gendler, 2022, "Adversarially robust conformal prediction"

- [Winner of the Jacobs-Gottwirth Scholarship \('21\)](#)
- [Graduated with Excellence](#)
- Current Position: Research Engineer at Amazon

Nitai Fingerhut, 2022, "Coordinated double machine learning"

- [Graduated with Excellence](#)
- Current Position: Research Engineer at Apple

## **SPONSORED LONG-TERM VISITORS AND POST-DOCTORAL ASSOCIATES**

### **Research Associates**

Dr. Yaniv Tenzer, March 2025 – Present

### **Interns**

Marguax Zaffran, July – October 2022, "Conformal prediction with missing values"  
Former PhD student at INRIA, at CMAP, Ecole Polytechnique, and at EDF R&D, Saclay

## **TECHNION ACTIVITIES**

2024    Committee Member of the Technion's Excellence Program

## **DEPARTMENTAL ACTIVITIES**

2023 – Present    Advising Students on Academic Excellence  
Department of Electrical and Computer Engineering, Technion

- 2022 – Present CS Representative in the ECE’s faculty council  
Department of Computer Science, Technion
- 2021 – Present Advising Students in the “Machine Learning and Data Analysis” Program  
Department of Computer Science, Technion
- 2021 – Present Steering Committee for the “Machine Learning and Data Analysis” Program  
Department of Computer Science, Technion
- 2021 – 2023 Advising Students on Academic Probation  
Department of Electrical and Computer Engineering, Technion

## **PUBLIC PROFESSIONAL ACTIVITIES**

### **Associate Editor**

- 2025 (est.) Foundations and Trends in Statistics
- 2025 Special issue on Energy and Data Efficiency in Artificial Intelligence  
IEEE Journal on Selected Areas in Information Theory

### **Working Group Organizer**

- 2025 (est.) – Present Vice-Chair of the Working Group on “Theory and Methods of Machine Learning,” Technical Committee 7, International Federation for Information Processing (IFIP)

### **Conference Organizer**

Mathematics of Imaging Data and ML, a mini-conference hosted by the Rothchild Prize Symposium, Jerusalem, Israel, September 19, 2024.

### **Program Committee**

IMS International Conference on Statistics and Data Science, ICSDS, Nice, France, December 16-19, 2024.

IMS International Conference on Statistics and Data Science, ICSDS, Seville, Spain, December 15-18, 2025.

### **Minisymposium organizer**

IMS International Conference on Statistics and Data Science, ICSDS, Nice, France, December 16-19, 2024.

SIAM's Mathematics of Data Science Meeting, SIAM MDS, San Diego, September 30, 2022.

The Israel Statistical Association, Annual Conference, Tel-Aviv University, June 9, 2022.

SIAM Conference on Imaging Science (SIAM-IS16), Albuquerque, New Mexico, May 23-26, 2016.

SIAM Conference on Imaging Science (SIAM-IS14), Baptist University, Hong Kong, May 12-14, 2014.

### **Reviewer: Manuscripts for scientific journals and conferences**

**Machine learning:** Advances in Neural Information Processing Systems; International Conference on Learning Representations; International Conference on Machine Learning; International Conference on AI and Statistics; Journal of Machine Learning Research; Transactions on Machine Learning Research; Springer Machine Learning; Foundations and Trends in Machine Learning

**Statistics:** Annals of Statistics; Journal of the American Statistical Association; Journal of the Royal Statistical Society: Series B; Electronic Journal of Statistics; SIAM Journal on Mathematics of Data Science

**Signal processing:** IEEE Transactions on Signal Processing; IEEE Journal of Selected Topics in Signal Processing; IEEE Transactions on Computational Imaging; IEEE International Conference on Acoustics, Speech, and Signal Processing; IEEE International Conference on Acoustics, Speech, and Signal Processing; SIAM Journal on Imaging Sciences; IEEE Transactions on Image Processing

### **Reviewer: Grants**

Israel Science Foundation; Dutch Research Council; Israeli Ministry of Innovation, Science and Technology: AI applications; Israeli Ministry of Innovation, Science and Technology: Slovak-Israel grants in the topic of communication systems for smart cars, space systems, or navigation systems; Israeli Smart Transportation Research Center

### **Reviewer: Prizes and awards**

Feder Prize