Nir Keret, PhD

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EDUCATION

2011—2013: Chinese language studies in Dalian University of Technology, Beijing University of Aeronautics and Astronautics, Shanghai University of Finance and Economics.

2014—2016: B.Sc in Accounting and Statistics (summa cum laude), Tel Aviv University.

2017—2018: M.Sc in Statistics (summa cum laude), under the supervision of Prof. Malka Gorfine, Tel Aviv University.
Thesis title: Marginalized Frailty-Based Illness-Death Model, with Application to the UK-Biobank Survival Data.

2019—2023: PhD in Statistics under the supervision of Prof. Malka Gorfine, Tel Aviv University.
Thesis title: Statistical Challenges in the Analysis of EHR Survival Data.

PROFESSIONAL POSITIONS

07/2019 - 07/2020: Data science intern, Intuit, Israel.

2024—: Postdoctoral scholar under the supervision of Prof. Ali Shojaie, Biostatistics department, University of Washington, Seattle.

2025—: Postdoctoral Fellow, eScience Institute, University of Washington, Seattle.

AWARDS

2018 Blecher prize for an Outstanding M.Sc student in Statistics, School of Mathematical Sciences, Tel-Aviv University.

2019 Eric Peretz prize for an excellent master thesis in Biostatistics, awarded by the Israeli Statistical Association.

2019–2023 Milner Grant (100,000$), for excellent PhD students.

2023 The Israel Data Science Initiative's cloud-computing grant for graduate students (5000$).
Project title: Unlocking Retrospective Prevalent Information in EHRs – a Revisit to the Pairwise Pseudo-likelihood.

2023 Student paper award – Lifetime Data Science Conference.
Paper title: Optimal Cox Regression Subsampling Procedure with Rare Events.

2023 Blecher prize for an Outstanding PhD student in Statistics, School of Mathematical Sciences, Tel-Aviv University.

2024 Eric Peretz prize for an excellent PhD thesis in Biostatistics, awarded by the Israeli Statistical Association.

PROFESSIONAL SERVICE

Served as a referee for Biometrics, Biostatistics, CLeaR conference (2025, 2026), Electronic Journal of Statistics, Journal of Statistical Computation and Simulation,

Journal of Machine Learning Research, Statistica Sinica, Statistics and Its Interface, Technometrics.

Served on the student paper competition committee for the 2025 Western North American Region (WNAR) meeting of the International Biometric Society in Whistler, Canada.

PUBLICATIONS

1. Gorfine M., Berndt S. I., Chang-Claude J., Hoffmeister M., Le Marchand L., Potter J., Slattery M. L., **Keret N.**, Peters U., Hsu L. (2017).
Heritability Estimation using a Regularized Regression Approach (HERRA): Applicable to continuous, dichotomous or age-at-onset outcome. *PLoS ONE 12(8): e0181269.*

2. Gorfine M., **Keret N.**, Ben-Arie A., Zucker D., Hsu L. (2021).
Marginalized frailty-based illness-death model: application to the UK-Biobank survival data. *Journal of the American Statistical Association, 116(535), 1155-1167.*

3. Eifer M., Tau N., Alhoubani Y., Kanana N., Domachevsky L., Shams J., **Keret N.**, Gorfine M. and Eshet Y. (2022).
Covid-19 mRNA vaccination: age and immune status and its association with axillary lymph node PET/CT uptake. *Journal of Nuclear Medicine, 63(1), 134-139.*

4. **Keret N.**, Gorfine M. (2023).
Analyzing Big EHR Data – Optimal Cox Regression Subsampling Procedure with Rare Events. *Journal of the American Statistical Association 118.544 (2023): 2262-2275.*
*Won the student paper competition of the 2023 Lifetime Data Science Conference.

5. **Keret N.**, Gorfine M. (2025)
Unlocking Retrospective Prevalent Information in EHRs–a Revisit to the Pairwise Pseudolikelihood. *Journal of the American Statistical Association 120.550 (2025): 658-670.*

6. Agassi T, **Keret N,**, Gorfine M. (2025)
Mastering rare event analysis: subsample-size determination in Cox and logistic regressions. *Biometrics 81.3.*

PREPRINTS

1. **Keret N.**, and Shojaie A. (2025)
GLM Inference with AI-Generated Synthetic Data Using Misspecified Linear Regression. *arXiv preprint* arXiv:2503.21968

2. Zhang X., **Keret N.**, Shojaie A., and Taeb A. (2025)
Convex Mixed-Integer Programming for Causal Additive Models with Optimization and Statistical Guarantees. *arXiv preprint* arXiv:2511.21126

PATENTS

Horesh, Yair, Nir Keret, and Yehezkel Shraga Resheff. "Method and system for anomaly detection based on statistical closed-form isolation forest analysis." U.S. Patent No. 11,531,676. 20 Dec. 2022.

ACADEMIC MENTORING

2022-2023 Academic advising to statistics MSc student Tal Agassi, under the supervision of Prof. Malka Gorfine.
Thesis title: "Mastering Rare Event Analysis: Optimal Subsample Size Determination in Cox and Logistic Regressions"

2024— Academic advising to statistics PhD student Shirley Mathur, under the supervision of Prof. Ali Shojaie.
Project title: "A Poisson Log–Normal VAR Model for Count Time-Series: Application to Longitudinal RNA Data"

CONFERENCE TALKS	12/2018 *"Illness-Death Model with Marginalized Frailty"*. Conference of the Eastern Mediterranean Region (EMR) of the IBS in Jerusalem (contributed).

06/2019 *"Illness-Death Model with Marginalized Frailty"*. The Spanish Biometric Conference (CEB) and Ibero-American Biometric Meeting (EIB) in Valencia, Spain (invited).

07/2022 *"Optimal Cox Regression Subsampling Procedure with Rare Events"*. The International Biometric Society International Conference in Riga, Latvia (contributed).

12/2022 *"Unlocking in EHRs – a Revisit to the Pairwise Pseudo-likelihood"*. International Conference on Statistics and Data Science in Florence, Italy (contributed).

05/2023 *"Optimal Cox Regression Subsampling Procedure with Rare Events"*. The Lifetime Data Science Conference in Raleigh, USA (invited - student award).

05/2023 *"Unlocking Retrospective Prevalent Information in EHRs – a Revisit to the Pairwise Pseudo-likelihood"*. The Lifetime Data Science Conference in Raleigh, USA (invited).

06/2023 *"Optimal Cox Regression Subsampling Procedure with Rare Events"*. The ICSA Applied Statistics Symposium in Ann Arbor, USA (invited).

06/2024 *"Unlocking Retrospective Prevalent Information in EHRs – a Revisit to the Pairwise Pseudo-likelihood"*. Conference of the Western North American Region (WNAR) of the IBS in Fort Collins, USA (contributed).

12/2024 *"Unlocking Retrospective Prevalent Information in EHRs – a Revisit to the Pairwise Pseudo-likelihood"*. The International Biometric Conference in Atlanta, USA (contributed).

06/2025 *"GLM Inference with AI-Generated Synthetic Data Using Misspecified Linear Regression"*. Conference of the Western North American Region (WNAR) of the IBS in Whistler, Canada (invited).

08/2025 *"GLM Inference with AI-Generated Synthetic Data Using Misspecified Linear Regression"*. The Joint Statistical Meetings (JSM) in Nashville, USA (contributed).

09/2025 *"Unlocking Retrospective Prevalent Information in EHRs – a Revisit to the Pairwise Pseudo-likelihood"*. The joint conference of the Italian Region (IR) and Eastern Mediterranean Region (EMR) of the IBS in Salerno, Italy (invited).

CONFERENCE POSTERS	06/2018 *"Illness-Death Model with Marginalized Frailty - Application to the UK-Biobank Data"*. The Israeli Statistical Association Conference.

11/2018 *"Illness-Death Model with Marginalized Frailty - Application to the UK-Biobank Data"*. PQG conference, Harvard School of Public Health.

SEMINAR TALKS

04/2021 *"Optimal Cox Regression Subsampling Procedure with Rare Events"*. The Tel–Aviv University statistics department seminar.

06/2021 *"Optimal Cox Regression Subsampling Procedure with Rare Events"*. The Hebrew University statistics department seminar.

06/2023 *"Unlocking Retrospective Prevalent Information in EHRs – a Revisit to the Pairwise Pseudo-likelihood"*. The Tel–Aviv University statistics department seminar.

TEACHING EXPERIENCE

2017-2023 Teaching assistant in Tel-Aviv University in the courses : Statistical Computing, Probability, Statistics for Medicine Students, Programming in R for Statisticians.

LANGUAGES

Hebrew – Mother tongue
English – Fluent
Mandarin Chinese – Advanced
Arabic – Advanced