

# Aris Paschalidis

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## Education

### University of Massachusetts Chan Medical School

M.D. CANDIDATE

Worcester, MA

Aug. 2022 - Present

### Brown University

B.S. IN COMPUTATIONAL BIOLOGY, MAGNA CUM LAUDE, GPA 4.0

Providence, RI

Sep. 2017 - May 2021

### Boston University

TOOK CLASSES WHILE IN HIGH SCHOOL, GPA 3.98

Boston, MA

Sep. 2015 - May 2017

## Research Experience

### Duke University School of Medicine

DEPARTMENT OF ORTHOPAEDIC SURGERY — LI LAB

Durham, NC

August 2024 - Present

- Investigated how pharmacologic and non-pharmacologic modalities affect peripheral nerve regeneration following injury.
- Developed large language model (LLM) based methods to automate literature reviews.

### University of Massachusetts Chan Medical School

PROGRAM IN DIGITAL MEDICINE — LIN LAB

Worcester, MA

June 2023 - Present

- Developed deep neural network-based methods to estimate age from electrocardiograms (ECGs) and machine learning models to predict the risk of future disease.

### Brown University

CENTER OF COMPUTATIONAL MOLECULAR BIOLOGY — BAILEY LAB

Providence, RI

January 2020 - August 2022

- Worked as an undergraduate lab member and then as a bioinformatician following graduation.
- Developer for coiaf, a package to estimate the number of malarial strains a patient is infected with
- Developer for MIPTools, a suite of computational tools for molecular inversion probe design, data processing, and analysis.
- Developer for mipicorn, a unified framework for molecular inversion probe (MIP) and amplicon-targeted sequencing analysis following micro haplotyping or variant calling.

### Massachusetts General Hospital

DEPARTMENT OF ORTHOPAEDIC SURGERY

Boston, MA

May 2019 - September 2020

- Worked as a research intern in the trauma department, shadowing doctors and conducting research primarily with Dr. Heng.
- Focused on examining associations between mental health scores and physical function scores of patients who had recently undergone total knee or hip replacements.

## Selected Honors & Awards

- 2025 **Invited Speaker**, Transition to 3<sup>rd</sup> Year Ceremony
- 2024 **Scholarship**, New England Hellenic Medical and Dental Society
- 2024 **Honorable Mention**, Massachusetts Medical Society Research Poster Symposium

## Selected Leadership & Community Outreach

### Interest Group Leader

ORTHOPEDIC SURGERY INTEREST GROUP

UMass Chan Medical School

Apr. 2023 - Apr. 2024

### Volunteer Firefighter & EMT

HOPE & JACKSON FIRE COMPANY

Scituate, RI

Sep. 2020 - Nov. 2021

## Selected Publications

### Dynamic Lifetime Risk Prediction of Alzheimer's Disease with Longitudinal Cognitive Assessment Measurements

DING H., YE Z., PASCHALIDIS A., BENNETT D. A., AU R., LIN H.  
*Alzheimer's & Dementia*. 2025;21(3):e70055. doi: 10.1002/alz.70055.

### Time to Achieve the Minimal Clinically Important Difference in Primary Total Hip Arthroplasty: Comparison of Anterior and Posterior Surgical Approaches

SALIMY M. S., PASCHALIDIS A., DUNAHOE J. A., CHEN A. F., ALPAUGH K., BEDAIR H. S., MELNIC C. M.  
*The Journal of Arthroplasty*. 2024;39(9):S314–S321. doi: 10.1016/j.arth.2024.04.038.

### Mental Health Effects on the Minimal Clinically Important Difference in Total Joint Arthroplasty

SALIMY M. S., PASCHALIDIS A., DUNAHOE J. A., CHEN A. F., ALPAUGH K., BEDAIR H. S., MELNIC C. M.  
*JAAOS - Journal of the American Academy of Orthopaedic Surgeons*. 2024;32(7):e321. doi: 10.5435/jaaos-d-23-00538.

### The Not-So-Distant Future or Just Hype? Utilizing Machine Learning to Predict 30-Day Post-Operative Complications in Laparoscopic Colectomy Patients

VELMAHOS C. S., PASCHALIDIS A., PARANJAPPE C. N.  
*The American Surgeon*. 2023;89(12):5648–5654. doi: 10.1177/00031348231167397.

### coiaf: Directly Estimating Complexity of Infection with Allele Frequencies

PASCHALIDIS A., WATSON O. J., AYDEMIR O., VERITY R., BAILEY J. A.  
*PLOS Computational Biology*. 2023;19(6):e1010247. doi: 10.1371/journal.pcbi.1010247.

### Patient-Reported Mental Health Score Influences Physical Function After Primary Total Knee Arthroplasty

MELNIC C. M., PASCHALIDIS A., KATAKAM A., BEDAIR H. S., HENG M., CHEN A. F., O'BRIEN T. M., SISODIA R. C.  
*The Journal of Arthroplasty*. 2021;36(4):1277–1283. doi: 10.1016/j.arth.2020.10.031.

### Predictive Models of Mortality for Hospitalized Patients With COVID-19: Retrospective Cohort Study

WANG T., PASCHALIDIS A., LIU Q., LIU Y., YUAN Y., PASCHALIDIS I. C.  
*JMIR Medical Informatics*. 2020;8(10):e21788. doi: 10.2196/21788.

### Regression and Classification Using Optimal Decision Trees

BERTSIMAS D., DUNN J., PASCHALIDIS A.  
*IEEE MIT Undergraduate Research Technology Conference (URTC)*. 2017:1–4. doi: 10.1109/urtc.2017.8284195.