Stylianos Serghiou

Last updated: August 17, 2026

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1. Research Interests

My research advances clinical AI and computational medicine to enable more continuous, personalized, and predictive healthcare. It focuses on developing multimodal and generative AI systems that integrate wearable, at-home, and clinical data to drive clinical intelligence, enabling real-time monitoring, therapeutic guidance, and improved outcomes across conditions. A core aim is to promote transparency, interpretability, and reproducibility in medical research while translating methodological innovation into practical, trustworthy tools for clinicians and scientists.

2. Educational Background

Sep 2016 - Aug 2020
Stanford University, California, USA
PhD in Epidemiology and Clinical Research
Thesis Topic: Computational methods to study the biomedical literature
Thesis Advisor: Prof. John Ioannidis

Jan 2018 - Jun 2019
Stanford University, California, USA
MS in Statistics

Sep 2009 - Jul 2015
University of Edinburgh, Edinburgh, UK
MBChB (Hons)

Sep 2011 - Jul 2012
University of Edinburgh, Edinburgh, UK
BSc (Hons) in Medical Sciences (Neuroscience)

3. Professional Appointments

Aug 2026 - present
Stanford University, CA, USA
Assistant Professor
University Tenure Track line Assistant Professor jointly appointed at the Department of Epidemiology and Population Health, and the Division of Computational Medicine

Feb 2022 - Dec 2025

Prolaio, Inc., Illinois, USA

VP, Head of Clinical Data Science

First employee at a cardiology startup using continuous biosignals and AI for remote heart failure management. My team built an LLM-driven clinical analytics platform, developed risk prediction models and 100+ biosignal-derived health features, and led deployment of the company's first clinical decision support product.

Aug 2020 - Feb 2022

Google, Inc., California, USA

AI Resident (Health)

Selected as 1 of 4 out of 500 applicants. Led multiple national-scale public health initiatives, including improving COVID-19 exposure risk prediction (AUC 78%→94%)

Jun 2019 - Sep 2019

Google, Inc., California, USA

Research Intern

Developed Python modules to enhance the implementation of machine learning to medical records.

Aug 2015 - Aug 2016

NHS Lothian, Edinburgh, UK

Academic Foundation Doctor & Honorary Clinical Fellow

Highly competitive (18/230 applicants accepted) dual post to serve as a junior doctor and academic at the University of Edinburgh.

2006 - 2008

National Guard, Cyprus

Second Lieutenant

Led a 30-person platoon and intelligence operations for a 120-soldier unit, transforming readiness from bottom-ranked to top 3 in the Division. Warehouse restructuring I initiated was adopted across a 1-2,000-soldier regiment.

4. Honors and Awards

2023 **Top Reviewer Award,** *Annals of Internal Medicine*

Recognized for achieving the highest peer review quality score of the year.

2022 **Elected Member,** *Sigma Xi*

Membership by nomination, in recognition of research achievement.

2021 **Top Reviewer Award,** *Machine Learning for Health (ML4H) Conference*

One of 10 reviewers selected from 100s for exceptional review quality. ($100).

2021 **Best Reviewer of the Year,** *Journal of Clinical Epidemiology*

One of two reviewers selected for exceptional quality and constructiveness.

2019 **Stanford Data Science Scholar,** *Stanford University*

One of 18 selected out of 187 applicants across all graduate students at Stanford for a 2 year scholarship.

2017 **David Sackett Young Investigator of the Year**, *Journal of Clinical Epidemiology*

Awarded annually to the young investigator having published the paper of highest quality.

2016 - 2018 **Scholarship,** *A. G. Leventis Foundation*

A merit-based grant to pursue graduate studies in the US ($12,000 per year).

2016 **Mensa International Ed Vincent Scholarship,** *MENSA*

One of 190 out of 11,000 applicants awarded for post-graduate studies ($1000).

2014 **Patrick-Trevor Award,** *Royal College of Ophthalmologists*

Annual award to a UK medical student interested in ophthalmology (£500).

2011 **Intercalated Scholarship,** *Royal College of Physicians of UK and Ireland*

Annual award to support a distinguished medical student undertaking an intercalated BSc (£2000).

2010-2013 **Academic Distinction,** *University of Edinburgh*

Annual award to medical students with a year average within the top 10%.

2011 **Best Magazine,** *Herald Scottish Student Press Awards*

I was the editor-in-chief of the Edinburgh University Science Magazine (EUSci) Focus section.

2009 **AMGEN Scholar,** *University of Cambridge and AMGEN*

Annual scholarship to 25 undergraduates across Europe for a research internship at Cambridge (£1120).

5. Scholarly Publications

5.1. Peer-reviewed journal articles (original research)

1. Kyriakopoulou, A., Samikos, K., Kanavaki, A., Alexopoulou, E., Argyropoulou, M., Psaltopoulou, T., Kanaka-Gantenbein, C., Dinopoulos, A., Giorgi, M., Antoniadou, A., Filippa, I., Siafakas, N., **Serghiou, S.**, & Papaevangelou, V. (2025). Clinical Associations with Lenticulostriatal Vasculopathy (LSV) at Birth: A Case–Control Study. *Children, 12*(2), 223. https://doi.org/10.3390/children12020223. *Performed the statistical analyses and contributed to study design.*

2. Young, M. T.*, Vispute, S.*, **Serghiou, S.***, Kumok, A., Shah, Y., Lane, K. J., Black-Ingersoll, F., Brochu, P., Bharel, M., Skenazy, S., Karthikesalingam, A., Bavadekar, S., Kansal, M., Shekel, T., Gabrilovich, E., & Wellenius, G. A. (2024). Quantifying urban park use in the USA at scale: empirical estimates of realised park usage using smartphone location data. *The Lancet. Planetary Health*, *8*(8), e564–e573. https://doi.org/10.1016/s2542-5196(24)00125-6. *Equal contribution (three first authors).*

3. **Serghiou, S.**, Axfors, C., & Ioannidis, J. P. A. (2023). Lessons learnt from registration of biomedical research. *Nature Human Behaviour*, *7*(1), 9–12. https://doi.org/10.1038/s41562-022-01499-0

4. Weintraub, R. L., Miller, K., Rader, B., Rosenberg, J., Srinath, S., Woodbury, S. R., Schultheiss, M. D., Kansal, M., Vispute, S., **Serghiou, S.**, Flores, G., Kumok, A., Shekel, T., Gabrilovich, E., Ahmad, I., Chiang, M. E., & Brownstein, J. S. (2023). Identifying COVID-19 Vaccine Deserts and Ways to Reduce Them: A Digital Tool to Support Public Health Decision-Making. *American Journal of Public Health*, *113*(4), 363–367. https://doi.org/10.2105/ajph.2022.307198. *Developed and orchestrated the data pipelines to process raw data into user-facing analytics populating the Digital Tool on a daily basis.*

5. Lin, J. B., **Serghiou, S.**, Miller, J. W., & Vavvas, D. G. (2022). Systemic Complement Activation Profiles in Nonexudative Age-Related Macular Degeneration: A Meta-Analysis. *Journal of Clinical Medicine*, *11*(9), 2371. https://doi.org/10.3390/jcm11092371. *Developed the meta-analysis.*

6. Lin, J. B., **Serghiou, S**., Miller, J. W., & Vavvas, D. G. (2022). Systemic Complement Activation Profiles in Nonexudative Age-Related Macular Degeneration: A Systematic Review. *Ophthalmology Science*, *2*(2), 100118. https://doi.org/10.1016/j.xops.2022.100118. *Developed the systematic review platform.*

7. Cho, S. M., **Serghiou, S.**, Ioannidis, J. P. A., Klassen, T. P., & Contopoulos-Ioannidis, D. G. (2021). Large Pediatric Randomized Clinical Trials in Clinicaltrials.gov. *Pediatrics*, *148*(3), e2020049771. https://doi.org/10.1542/peds.2020-049771. *Developed an R package to extract all relevant data from ClinicalTrials.gov, and turn it into an analytic dataset.*

8. Murphy, K., Kumar, A., & **Serghiou, S**. (2021). Risk score learning for COVID-19 contact tracing apps. *Proceedings of Machine Learning Research (PMLR), 126,* 1–17. https://proceedings.mlr.press/v149/murphy21a/murphy21a.pdf

9. Sadilek, A., Liu, L., Nguyen, D., Kamruzzaman, M., **Serghiou, S.**, Rader, B., Ingerman, A., Mellem, S., Kairouz, P., Nsoesie, E. O., MacFarlane, J., Vullikanti, A., Marathe, M., Eastham, P., Brownstein, J. S., Arcas, B. A. y., Howell, M. D., & Hernandez, J. (2021). Privacy-first health research with federated learning. *Npj Digital Medicine*, *4*(1), 132.

https://doi.org/10.1038/s41746-021-00489-2. *Structured and wrote the clinical section of the article. Addressed all peer-reviewer comments.*

10. **Serghiou, S.**, Marton, R. M., & Ioannidis, J. P. A. (2021). Media and social media attention to retracted articles according to Altmetric. *PloS One*, *16*(5), e0248625. https://doi.org/10.1371/journal.pone.0248625

11. **Serghiou, S.**, Contopoulos-Ioannidis, D. G., Boyack, K. W., Riedel, N., Wallach, J. D., & Ioannidis, J. P. A. (2021). Assessment of transparency indicators across the biomedical literature: how open is open? PLoS Biol, 19(3), e3001107. https://doi.org/10.1371/journal.pbio.3001107

12. Kyriakopoulou, A., **Serghiou, S.**, Dimopoulou, D., Arista, I., Psaltopoulou, T., Dinopoulos, A., & Papaevangelou, V. (2020). Antenatal imaging and clinical outcome in congenital CMV infection: A field-wide systematic review and meta-analysis. *The Journal of Infection*, *80*(4), 407–418. https://doi.org/10.1016/j.jinf.2020.02.012. *Performed the statistical analyses, including the meta-analysis.*

13. Wallach, J. D., **Serghiou, S.**, Chu, L., Egilman, A. C., Vasiliou, V., Ross, J. S., & Ioannidis, J. P. A. (2020). Evaluation of confounding in epidemiologic studies assessing alcohol consumption on the risk of ischemic heart disease. *BMC Medical Research Methodology*, *20*(1), 64. https://doi.org/10.1186/s12874-020-0914-6. *Developed the method being used in this article, and turned it into an R package used in this paper.*

14. Parisinos, C. A., **Serghiou, S.**, Katsoulis, M., George, M. J., Patel, R. S., Hemingway, H., & Hingorani, A. D. (2018). Variation in Interleukin 6 Receptor Gene Associates With Risk of Crohn's Disease and Ulcerative Colitis. *Gastroenterology*, *155*(2), 303-306.e2. https://doi.org/10.1053/j.gastro.2018.05.022. *Meta-analytically synthesized results from various datasets.*

15. **Serghiou, S.**, & Ioannidis, J. P. A. (2018). Altmetric Scores, Citations, and Publication of Studies Posted as Preprints. *JAMA: The Journal of the American Medical Association*, *319*(4), 402. https://doi.org/10.1001/jama.2017.21168

16. **Serghiou, S.**, Kyriakopoulou, A., & Ioannidis, J. P. A. (2016). Long noncoding RNAs as novel predictors of survival in human cancer: a systematic review and meta-analysis. *Molecular Cancer*, *15*(1), 50. https://doi.org/10.1186/s12943-016-0535-1

17. **Serghiou, S.**, Patel, C. J., Tan, Y. Y., Koay, P., & Ioannidis, J. P. A. (2016). Field-wide meta-analyses of observational associations can map selective availability of risk factors and the impact of model specifications. *Journal of Clinical Epidemiology*, *71*, 58–67. https://doi.org/10.1016/j.jclinepi.2015.09.004

18. Ashworth, B. E., Stephens, E., Bartlett, C. A., **Serghiou, S.**, Giacci, M. K., Williams, A., Hart, N. S., & Fitzgerald, M. (2016). Comparative assessment of phototherapy protocols for reduction of oxidative stress in partially transected spinal cord slices undergoing secondary degeneration. BMC Neuroscience, 1–12. https://doi.org/10.1186/s12868-016-0259-6. Analyzed the GFP-tagged brain tissue samples for oxidative stress.

19. Macleod, M. R., McLean, A. L., Kyriakopoulou, A., **Serghiou, S.**, Wilde, A. de, Sherratt, N., Hirst, T., Hemblade, R., Bahor, Z., Nunes-Fonseca, C., Potluru, A., Thomson, A., Baginskaite, J., Baginskitae, J., Egan, K., Vesterinen, H., Currie, G. L., Churilov, L., Howells, D. W., & Sena, E. S. (2015). Risk of Bias in Reports of In Vivo Research: A Focus for Improvement. *PLoS Biology*, *13*(10), e1002273. https://doi.org/10.1371/journal.pbio.1002273. *Part of the team completing the systematic review.*

5.2. Peer-reviewed publications (other)

1. **Serghiou, S.**, & Rough, K. (2023). Deep Learning for Epidemiologists: An Introduction to Neural Networks. *Am J Epidemiol. 192*(11), 1904-1916.

2. Hardwicke, T. E., **Serghiou, S.**, Janiaud, P., Danchev, V., Crüwell, S., Goodman, S. N., & Ioannidis, J. P. A. (2020). Calibrating the Scientific Ecosystem Through Meta-Research. *Annual Review of Statistics and Its Application*, *7*(1), 1–27. https://doi.org/10.1146/annurev-statistics-031219-041104. *Wrote sections of the review.*

3. **Serghiou, S.**, & Goodman, S. N. (2019). Random-Effects Meta-analysis: Summarizing Evidence With Caveats. *JAMA: The Journal of the American Medical Association*, *321*(3), 301. https://doi.org/10.1001/jama.2018.19684

4. Janiaud, P., **Serghiou, S.**, & Ioannidis, J. P. A. (2019). New clinical trial designs in the era of precision medicine: An overview of definitions, strengths, weaknesses, and current use in oncology. *Cancer Treatment Reviews*, *73*, 20–30. https://doi.org/10.1016/j.ctrv.2018.12.003. *Researched various clinical trial designs and synthesized them into early drafts of the manuscript.*

5.3. Book chapters

1. **Serghiou, S.**, Goodman, S. N. (2019). Random-Effects Meta-analysis: Summarizing Evidence With Caveats. *Chapter in: JAMA Guide to Statistics and Methods, 1st Edition.* https://www.amazon.com/Guide-Statistics-Methods-Edward-Livingston/dp/1260455327

5.4. Books

1. Card, D., Min, Y., **Serghiou, S**. (2021). Open, rigorous and reproducible research: A practitioner's handbook. https://stanforddatascience.github.io/best-practices/

5.5. Digital Publications

1. Young, M. T.*, Vispute, S.*, **Serghiou, S.***, Kumok, A., Shah, Y., Lane, K. J., Black-Ingersoll, F., Brochu, P., Bharel, M., Skenazy, S., Karthikesalingam, A., Bavadekar, S., Kansal, M., Shekel, T., Gabrilovich, E., & Wellenius, G. A. (2024). Urban Park Use in the United States at Census Tract 2017-2021. *Harvard Dataverse*. https://doi.org/10.7910/DVN/K71AJS. ** Equal contribution (three first authors).*
2. **Serghiou, S.** (2023). metareadr: An R package to read meta-data from the web. (Version 0.2.1) [Computer software]. *GitHub.* https://github.com/serghiou/metareadr
3. **Serghiou, S.** (2021). clinicaltrialr: An R package to extract data from ClinicalTrials.gov. (Version 0.6.7) [Computer software]. *GitHub.* https://github.com/serghiou/clinicaltrialr
4. **Serghiou, S.** (2020). rtransparent: An R package that automatically identifies and extracts indicators of transparency from the published literature (Version 0.2.5) [Computer software]. *GitHub.* https://github.com/serghiou/rtransparent

5.6. Abstracts not published in other forms

1. Martin, C., Sideris, K., Cacho-Soblechero, M., Sekaric, J., Hanff, T., Schmalfuss, C., Lewis, N., Sallam, K., Hanson, H., Brinker, L., Pipke, M., Perez Alday, E. A., Alla, S., Steinhubl, S., Edelberg, J., Koren, M., Wegerich, S., Kurio, G., **Serghiou, S.**, & Stehlik, J. (2024). Abstract 4138176: Identifying Clinical Stability After Heart Failure Discharge: A machine learning-based decision aid based on continuous ECG and accelerometry. *Circulation*, *150*(Suppl_1), A4138176–A4138176. https://doi.org/10.1161/circ.150.suppl_1.4138176. *Co-senior author.*
2. Purgar, M., Serghiou, S., Čulina, A., Tarandek, A., Vidić, R., Wallach, J. D. (2025). Assessment of Transparency Across Articles in Ecology and Evolutionary Biology Journals, 2000–2024. *Abstract book - Congress of the European society for evolutionary biology (ESEB).* str. 1502-1502. *Developed the method and R package.*
3. Marwick, K. F. M., Rodes, K. J., **Serghiou, S.**, Steel, R. M., Campbell, A., Hall, J., Sprengelmeyer, R. (2013). Sensitivity to cuteness in baby faces is not influenced by pregnancy. *The Lancet*, 381:S72 – Proceedings of Clinician Scientists in Training Meeting, London. *Recruited participants and carried out interviews.*

6. Clinical Trials

6.1. Current trials

2025 - ongoing **Study of the Progression of Chronic Cardiovascular Conditions (OCORO).** *NCT07420907*

Contributed to protocol design and statistical analysis plan determination.

6.2. Past / Completed Trials

2022 - 2024 **A Noninterventional, Single-Center Feasibility Study to Evaluate Measures of Heart Failure Risk.** *NCT05646056.*

Contributed to protocol design, statistical analysis plan determination, and statistical analysis.

7. Editorial Service

7.1. Editorial board memberships

2022 - ongoing **Journal of Clinical Epidemiology (JCE).**

Editorial board member.

7.2. Other ad hoc peer review activities

2024 - **Pediatrics.** *Journal*

Reviewer in clinical research methods (count: 1)

2023 - **Annals of Internal Medicine.** *Journal*

Reviewer in machine learning for healthcare (count: 2)

2021 - **NeurIPS - ML4H.** *Conference*

Reviewer in clinical data science (count: 7 reviews + 2 mentees)

2021 - **npj Digital Medicine.** *Journal*

Reviewer in machine learning for healthcare (count: 1 review)

2019 - **JAMA.** *Journal*

Reviewer in meta-research and meta-analytic methods (count: 8 reviews – 2 for JAMA Oncology)

2019 - **BMJ.** *Journal*

Reviewer in meta-research and machine learning for healthcare (count: 7 reviews)

2017 - **Journal of Clinical Epidemiology.** *Journal*

Reviewer in clinical epidemiology methods (count: >10 reviews)

2015 - **PLoS One.** *Journal*

Reviewer in ophthalmology, neuroscience, epidemiology and statistics (count: >10 reviews)

8. Service to Professional Organizations

8.1. Membership

2024 - **European Society for Clinical Investigation.** *Professional association.*

9. Presentations

9.1. Invited presentations

2025 **Department of Epidemiology and Population Health,** Stanford University, USA

Multimodal AI Systems for Longitudinal, Personalized, and Scalable Care: Building the Foundations of Virtual Medicine

2022 **Computational Health Informatics Program,** Boston Children's Hospital

Computational Medicine: Applications of Computational Methods Across the Spectrum of Healthcare.

2022 **Population Health Sciences,** Weill Cornell University, USA

Computational Medicine: Applications of Computational Methods Across the Spectrum of Healthcare.

2021 **Department of Biomedical Informatics,** Columbia University, USA

Computational Medicine: Applications of Computational Methods Across the Spectrum of Healthcare.

Apr 2021 **Sharing of Clinical Trial Data - 2nd Workshop,** Reproducibility in Therapeutic Research (ReiTheR)**,** France

Assessment of transparency indicators across the biomedical literature: How open is open?

9.2. International Meetings

Sep 2017 **8th International Congress on Peer Review and Scientific Publication,** Chicago, IL, USA

Associations Between bioRxiv Preprint Noncitation Attention and Publication in the Biomedical Literature: A Cross-sectional and Cohort Study.

10. Community Service

2018 **Reproducible Science,** Stanford University

Co-founder

Initiative to promote the knowledge and practice of good scientific methods amongst graduate students at Stanford.

2018 **Big Impact in Bio,** Amgen

Featured

I was one of a few Amgen Alumni selected to be featured on a YouTube series by Amgen. My topic was improving the science of science (https://youtu.be/FnFY1gxrMHo, https://youtu.be/4Ts0yd-jWZ4).

2011 - 2012 **UK Medical Student Association,** UK

Conference organizer

Determined conference topic, invited speakers, prepared conference program and was conference day leader. Accommodated more than 250 delegates. Received personal complements by Sir Catto.

2010 - 2011 **Medical Students of Edinburgh Council,** University of Edinburgh

European Student representative

Voted by the student body; became part of various university committees (e.g. PBL committee).

2009 - 2010 **SKIP Edinburgh,** University of Edinburgh

Research and Development officer

Designed our intervention and daily educational activities at an orphanage in Moldova for children with severe neurological disabilities.

2008 - 2011 **Edinburgh University Science Magazine,** University of Edinburgh
Focus Editor-in-Chief / Secretary / Editor / Author
Located and interviewed a NASA astronaut (Dr Piers Sellers). Received the Herald Scottish Award (as above). I truly enjoy explaining and popularizing science.

11. Teaching and Coursework

2023 - 2024 **The Practice of Reproducible Research (BIOS216),** Stanford University
Visiting Instructor
I help teach the BIOS 216 (The Practice of Reproducible Research) course to graduate students at Stanford on how to use data and code in producing rigorous and reproducible research. Invited by Prof. Goodman to teach 1/3rd of the course in 2023 and 2/3rds in 2024.

2016 - 2019 **Statistics in Medicine (HUMBIO 89),** Stanford University
Principal Instructor
Taught initially as a teaching assistant for 2 quarters, and then as a principal instructor for 3 quarters.

2018 **Scientific Method and Bias (MED73N),** Stanford University
Teaching Assistant

2019 **Meta-Research (HRP206),** Stanford University
Teaching Assistant

12. Trainees

Data scientists

- Erick Perez Alday, PhD - Senior Data Scientist, Prolaio
- Miguel Cacho Soblechero, PhD - Director of Data Services, Prolaio
- Claire Martin, MS - Senior Data Scientist, Prolaio
- Michael Young, PhD - Senior Data Scientist, Prolaio

Interns

- Yan Mia Min, MD PhD - PhD Research Fellow, Stanford University
- Prakriti Shetty - Masters Student, UMass Amherst
- Mia Nicole Dittrich - Masters Student, Stanford University