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Bio

BIO

Avery Sun is a postdoctoral scholar at Stanford Cardiovascular Institute and Department of Materials Science and Engineering with research interest in extracellular matrix biology, mechanobiology, cardiac fibrosis, biomaterials, and tissue engineering. Prior to this appointment, Avery received his PhD in Biomedical Engineering from National University of Singapore, focusing on matrix- and mechanobiology-mediated mesenchymal drift and rejuvenation of cardiac fibroblasts in aging and diseases.

PROFESSIONAL EDUCATION

- Ph.D., Mechanobiology Institute (MBI) & Biomedical Engineering Dept, National University of Singapore (2026)
- Bachelor of Engineering, Southern University of Science & Technology (2021)

STANFORD ADVISORS

- Sarah Heilshorn, Postdoctoral Faculty Sponsor

LINKS

- LinkedIn: https://www.linkedin.com/in/averyruisun/

Publications

PUBLICATIONS

- **Mechanical memory primes cells for confined migration.** *Cell reports*
  Lee, J. W., Chang, Y., Chitnis, M. S., Li, Y., Gao, X., Sun, A. R., Zhu, J., Young, J. L., Holle, A. W.
  2026; 45 (4): 117267
- **Hybrid hydrogel-extracellular matrix scaffolds identify biochemical and mechanical signatures of cardiac ageing.** *Nature materials*
  Sun, A. R., Ramli, M. F., Shen, X., Kannivadi Ramakanth, K., Chen, D., Hu, Y., Vidyasekar, P., Foo, R. S., Long, Y., Zhu, J., Ackers-Johnson, M., Young, J. L.
  2025; 24 (9): 1489-1501
- **Isolation, Extraction, and Analysis of Cells After Confined Migration.** *Current protocols*
  Gao, X., Li, Y., Lee, J. W., Zhou, J., Rangaraj, V., Sun, A. R., Young, J. L., Holle, A. W.
  2025; 5 (9): e70204
- **All the small things: Nanoscale matrix alterations in aging tissues.** *Current opinion in cell biology*
  Sun, A. R., Hengst, R. M., Young, J. L.
  2024; 87: 102322