

## Sabyasachi Bandyopadhyay

Postdoctoral Scholar, Cardiovascular Medicine

### Bio

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#### STANFORD ADVISORS

- Sanjiv Narayan, Postdoctoral Faculty Sponsor

### Research & Scholarship

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#### PROJECTS

- Reconstruction of 12-lead electrocardiograms from implanted device signals using deep learning
- Predicting Dementia risk in patients with Atrial Fibrillation

### Publications

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#### PUBLICATIONS

- **AMBULATORY ISCHEMIA DETECTION ENABLED THROUGH SPATIALLY-ENCODED DEEP LEARNING OF DERIVED INSERTABLE CARDIAC MONITOR SIGNALS**

Ansari, R., Bandyopadhyay, S., Ganesan, P., Baykaner, T., Perez, M., Perino, A., Narayan, S. M., Rogers, A. J.  
ELSEVIER SCIENCE INC.2026: A1224

- **AUTOMATIC DIAGNOSTIC TEXT INTERPRETATION FROM 12-LEAD ECGS USING ECG-TEXT JOINT EMBEDDING FOUNDATION MODEL**

Ganesan, P., Peralta, E., Bandyopadhyay, S., Ruiperez-Campillo, S., Sillett, C., Rogers, A. J., Baykaner, T., Clopton, P., Perino, A., Narayan, S. M.  
ELSEVIER SCIENCE INC.2026

- **PREDICTION OF INCIDENT DEMENTIA IN ATRIAL FIBRILLATION PATIENTS**

Bandyopadhyay, S., Srivastava, V., Peralta, E., Stringer, J., Ansari, R., Ganesan, P., Deb, B., Clopton, P., Rogers, A. J., Brodt, C., Narayan, S. M.  
ELSEVIER SCIENCE INC.2026: A145

- **Deep Learning-Based Continuous QT Monitoring to Identify High-Risk Prolongation Events After Class III Antiarrhythmic Initiation. *Circulation***

Ansari, R. A., Bandyopadhyay, S., Trivedi, R. K., Brennan, K. A., Liu, X., Ganesan, P., Hughes, J. W., Perino, A. C., Ashley, E. A., Wang, P. J., Coleman, T., Perez, M. V., Ouyang, et al  
2026; 153 (1): 35-46

- **Long-term, ambulatory 12-lead ECG from a single non-standard lead using perceptual reconstruction. *medRxiv : the preprint server for health sciences***

Bandyopadhyay, S., Chiu, I. M., Ansari, R., Liu, S., Hughes, J. W., Perino, A. C., Bhatia, N. K., Ouyang, D., Ashley, E. A., Perez, M. V., Zou, J., Narayan, S. M., Rogers, et al  
2025

- **Perioperative Artificial Intelligence Driven Integrated Modeling of Surgeries using Anesthetic, Physical and Cognitive Statuses for Predicting Hospital Outcomes. *Research square***

Bandyopadhyay, S., Zhang, J., Ison, R. L., Cherukuvada, B. P., Libon, D. J., Tighe, P., Rashidi, P., Price, C.  
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- **Deep Learning-Based Continuous QT Monitoring Identifies High-Risk Prolongation Events After Class III Antiarrhythmic Initiation**

Rogers, A., Ansari, R., Bandyopadhyay, S., Trivedi, R., Brennan, K., Ganesan, P., Perino, A., Ashley, E., Wang, P., Perez, M., Ouyang, D., Narayan, S.

LIPPINCOTT WILLIAMS & WILKINS.2025

- **Development of Personalized Myocardial Surface Mesh Models with LGE Scar Integration: a Pipeline for Machine Learning and Digital Twins**  
Liu, X., Qayyum, A., Ganesan, P., Bandyopadhyay, S., Somani, S., Brennan, K., Wang, P., Niederer, S., Narayan, S., Rogers, A.  
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Abstract 4367773: Predicting Peak Heart Rate from Resting 12-Lead ECGs in Patients Undergoing Stress Testing using Deep Learning**  
Liu, X., Bandyopadhyay, S., Ganesan, P., Somani, S., Brennan, K., Karius, A., Baykaner, T., Perino, A., Wang, P., Ashley, E., Perez, M., Narayan, S., Rogers, et al  
LIPPINCOTT WILLIAMS & WILKINS.2025
- **AI-based prediction of mortality in patients with ventricular tachycardia**  
Bandyopadhyay, S., Sadri, S., Brennan, K., Ganesan, P., Clopton, P., Ruiperez-Campillo, S., Peralta, E., Sillett, C., Rogers, A., Narayan, S.  
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Identifying optimum ECG features to predict sudden cardiac arrest at varying time points before the event**  
Bandyopadhyay, S., Ganesan, P., Brennan, K., Ruiperez-Campillo, S., Ansari, R., Clopton, P., Perino, A., Wang, P., Ashley, E., Perez, M., Narayan, S., Rogers, A.  
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Novel Foundation Models for Detecting and Generating Text Reports of Atrial Fibrillation from 12-lead ECGs in a Large Registry**  
Ganesan, P., Peralta, E., Ruiperez-Campillo, S., Bandyopadhyay, S., Rogers, A., Chang, H., Brennan, K., Sillett, C., Clopton, P., Perino, A., Niederer, S., Narayan, S.  
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Automated End-to-End Framework for Extracting Raw ECG Waveforms and ST Segment Values from ECG Reports and Predicting ST Elevation by Machine Learning**  
Ganesan, P., Liu, X., Bandyopadhyay, S., Ansari, R., Somani, S., Brennan, K., Karius, A., Baykaner, T., Perino, A., Wang, P., Ashley, E., Perez, M., Narayan, et al  
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Non-Contact Magnetocardiography Localizes Atrial Foci as Accurately as High-Resolution Contact ECG**  
Brennan, K., Bandyopadhyay, S., Ganesan, P., Ansari, R., Somani, S., Liu, X., Baykaner, T., Perino, A., Wang, P., Narayan, S., Rogers, A.  
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Transformer-based ECG beat foundation model reconstructs full 12-Lead morphology, vectorcardiogram and predicts peak heart rate in stress ECG**  
Bandyopadhyay, S., Liu, X., Ganesan, P., Somani, S., Karius, A., Baykaner, T., Wang, P., Ashley, E., Perez, M., Narayan, S., Rogers, A.  
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Longitudinal Evaluation of Anti-Arrhythmic Drug Use to Predict Hospitalization or Death in Patients with Ventricular Tachycardia**  
Sadri, S., Brennan, K., Bandyopadhyay, S., Ganesan, P., Desai, Y., Peralta, E., Feng, R., Sillett, C., Ruiperez-Campillo, S., Wang, P., Clopton, P., Rogers, A., Narayan, et al  
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Large Language Models Detect Ventricular Tachycardia Recurrence in Clinical Notes and Enable Prediction of Clinical Outcomes at Scale**  
Sadri, S., Brennan, K., Bandyopadhyay, S., Desai, Y., Ganesan, P., Peralta, E., Feng, R., Sillett, C., Ruiperez-Campillo, S., Wang, P., Clopton, P., Rogers, A., Narayan, et al  
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- **Real-time prediction of intensive care unit patient acuity and therapy requirements using state-space modelling.** *Nature communications*  
Contreras, M., Silva, B., Shickel, B., Davidson, A., Ozrazgat-Baslanti, T., Ren, Y., Guan, Z., Balch, J., Zhang, J., Bandyopadhyay, S., Loftus, T., Khezeli, K., Lipori, et al  
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- **Physics-Inspired Diffusion Probabilistic Models for Improved Denoising in Intracardiac Time Series.** *Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual International Conference*  
Ruipe-rez-Campillo, S., Rau, M., Ganesan, P., Brennan, K. A., Feng, R., Bandyopadhyay, S., Rogers, A. J., Narayan, S. M., Vogt, J. E.  
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- **CONTINUOUS LONG-TERM QT INTERVAL MONITORING USING SPATIALLY ENCODED DEEP LEARNING OF DERIVED IMPLANTABLE CARDIAC MONITOR SIGNALS**  
Ansari, R., Bandyopadhyay, S., Brennan, K., Srivastava, V., Ganesan, P., Feng, R., Baykaner, T., Perez, M., Perino, A., Narayan, S. M., Rogers, A. J.  
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- **LARGE LANGUAGE MODELS IDENTIFY ATRIAL FIBRILLATION PROGRESSION ON UNPRECEDENTED SCALE**  
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- **Identification of cardiac wall motion abnormalities in diverse populations by deep learning of the electrocardiogram.** *NPJ digital medicine*  
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- **Advances in Electrocardiogram-Based Artificial Intelligence Reveal Multisystem Biomarkers.** *Journal of clinical & experimental cardiology*  
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