

Rengasayee (Sai) Veeraraghavan, PhD,

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Biography:

Rengasayee (Sai) Veeraraghavan, PhD, is an Assistant Professor in the Department of Biomedical Engineering at the Ohio State University (OSU). His lab (Nanocardiology lab) uses light and electron microscopy techniques and computational image analysis approaches coupled with mathematical modeling and functional physiological imaging to uncover how nanoscale structure influences the heart's rhythm in health and disease with the goal of developing novel therapies against life-threatening rhythm disturbances (arrhythmia). His research is currently supported by grants from the National Institutes of Health and the American Heart Association.

Research Interests:

- *Indirect* Correlative Light & Electron Microscopy (*iCLEM*)
- Super-resolution microscopy (STORM, STED)
- Computational image analysis
 - Spatial analysis
 - Cluster analysis (for single molecule localization data)
 - Automated morphometry
- Functional imaging
 - Resonant-scanning confocal Ca²⁺ imaging
 - Whole-heart optical mapping
- Cardiac physiology / biology
 - Mechanisms of cardiac arrhythmia (irregular heartbeats)
 - Non-canonical mechanisms of cell-cell communication
 - Distributed synthesis of membrane proteins