Cardiac electrophysiology (EP) is a field in medicine focused on treating abnormal heart rhythms (arrhythmias). Innovation, including the development of irrigated catheters, three dimensional mapping, and a growing understanding of catheter ablation biophysics has propelled the field forward with higher procedural success rates and fewer complications. In this seminar we will review how engineering concepts have translated into various clinical applications allowing for the catheter based treatment of arrhythmias. We will also discuss the limitations encountered during cardiac EP ablation procedures with current technologies and where there is need for continued innovation.

Dr. Ganeshan is a Cardiologist in New Haven, CT and a current fellow in the Yale School of Medicine cardiac electrophysiology program. After medical school, I completed my residency in Internal Medicine and fellowship in Cardiovascular Disease at Yale. Within medicine, cardiac electrophysiology is among the most analytical fields, and requires strong collaboration with engineers and innovators in industry to successfully treat patients. I am relocating to the Lubbock area in the coming months to join a new practice and look forward to more discussions and potentially collaborating with anyone with interest.