



Investigative Workshop

Heart Rhythm Disorders. December 3-5, 2014.

Wednesday, December 3rd

8:15-8:55 Breakfast at NIMBioS

9:00-9:15 Introduction to NIMBioS

9:15-9:40 Introduction of Participants

9:45-10:45 Talk: **“Simple to complex models and mechanisms of arrhythmia: historical perspective”** by *Flavio Fenton*.

break

11:00-11:45 Talk: **“Spatiotemporal dynamics and control of alternans”** by *Alain Karma*.

Lunch at NIMBioS

1:30-2:00 Talk: **“Bifurcation analysis of cardiac alternans”** by *Xiaopeng Zhao*.

2:00-2:30 Talk: **“Local onset of alternans in the heart”** by *Elena Tolkacheva*.

2:30-5:00 Collaborative discussion groups

5:00-6:30 Reception at NIMBioS

Thursday, December 4th

8:15-8:55 Breakfast at NIMBioS

9:00-9:45 Talk: “**Multiscale analysis of heart rate variability**” by *Jianbo Gao*

Break

10:00-10:45 Talk: “**Spatiotemporal characterization of surface ECG for atrial fibrillation therapy and management**” by *Marianna Meo*.

Break

11:00-12:00 Discussion groups

Lunch at NIMBioS

1:30-2:00 Talk: “**Calcium alternans as a phase transition in cardiac myocytes**” by *Yohannes Shiferaw*

2:00 -2:30 Talk: “**Controlling alternans via point stimulation**” by *John W. Cain*

2:30-3:00 Talk: “**Control of cardiac alternans as a means of illuminating alternans mechanisms**” by *David Christini*.

3:30-5:00 Collaborative Discussion Groups

Dinner on your own

Friday, December 5th

8:15-8:55 Breakfast at NIMBioS

9:00-9:30 Talk: **“Triggered Activity in LQT Syndrome”** by *Alain Karma*

9:30-10:00 Talk: **“Mechanisms by which specific patterns of premature beats can lead to VT and VF”** by *Niels Otani*.

Break

10:15-11:45 Facilitated discussion of future directions with all workshop participants

Lunch at NIMBioS