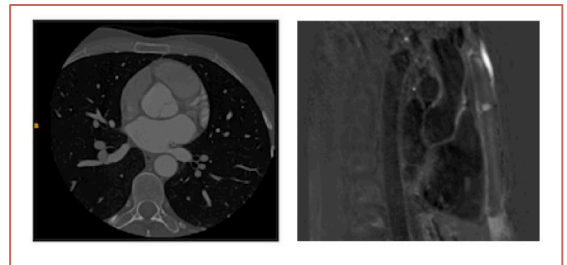


## Statistical Atlases and Computational Models of the Heart - Segmentation of Left Atrial Wall Thickness STACOM - SLAWT

**MICCAI:** Medical Image Computing and Computer Assisted Intervention (MICCAI) is the premier international conference in the domain of medical image computing and analysis, with in-depth papers on the multidisciplinary fields of biomedical image computing and analysis, medical robotics and computer-assisted intervention. The conference brings together scientists from many fields and provides a forum to exchange ideas and present technological advances in this exciting and rapidly growing field.

**STACOM challenges:** The Statistical Atlases and Computational Models of the Heart (STACOM) workshop series have been successfully running for over 5 years and attracts over 50 participants each year. Its proceedings are published in the Springer LNCS series.

**STACOM-SLAWT:** Pulmonary vein isolation (PVI) is often the first procedure performed in patients referred for catheter ablation of atrial fibrillation. The procedural success rate of an index PVI varies between 15-75%. An important cause for this could be non-transmural lesion formation due to insufficient catheter tip-tissue contact. Recent developments have enabled measurement of the force with which the catheter tip touches the myocardium. However, in order to determine the optimal radio-frequency power and application time, local myocardial thickness also needs to be known. Non-invasive 3-dimensional imaging using cardiac CT can accurately provide information about the left atrium (LA) wall thickness. New sequence design has also enabled acquisition of the LA wall thickness using MRI. The reliability of these parameters needs to be determined prior to evaluating the clinical utility.



This challenge focuses on segmentation algorithms of left atrial wall thickness from MRI and CT. Participants will be provided with CT (n=10) and MRI (n=10) datasets with various degrees of difficulty. Teams may participate in either or both categories: MRI and CT. The aim of this challenge is to provide the participants with an opportunity to present their segmentation methods on challenging datasets.

The STACOM-SLAWT challenge workshop will be run as a collaboration between researchers, rather than a competition. There will be no 'winner' and comparative results will be presented without rankings. We encourage participation by a broad selection of researchers using a range of methods, both complex and simple. Groups are encouraged to provide results from algorithms in preliminary stages of development. Each participant commits to submitting a paper to the STACOM workshop summarizing the method used and results from the test datasets.

### IMPORTANT DATES

- **Data available to challengers: 25th April 2016** – please contact Rashed Karim (rashed.karim@kcl.ac.uk)
- **Submission of results and paper: 15th June 2016** – only preliminary results are expected and full analysis can be submitted with the final camera ready version on 1st August.
- **Notification of acceptance: 15th July 2016.**
- **Workshop: 17th October 2016.**

### WEBSITE

**STACOM:** <http://stacom2016.cardiacatlas.org>      **MICCAI:** <http://miccai2016.org>

### ORGANISERS

Dr Rashed Karim and Dr. Kawal Rhode (King's College London, UK)