The **Institute for Biomedical Engineering** at the **University and ETH Zurich** and **MEDISIM** at **École Polytechnique Paris** jointly develop Magnetic Resonance image-guided computational models of the heart. As part of our efforts to predict growth and remodelling of the failing heart we are offering a

PhD position – Image-guided Computational Cardiac Mechanics

The research project aims at developing image-guided and experimentally validated computational models of cell aggregate-level structural and tissue-level mechanical changes in pathologic growth and remodelling of the heart. To this end, a growth and remodelling law will be formulated and implemented, which will be calibrated and validated using longitudinal in-vivo Magnetic Resonance imaging and experimental data of cardiac microstructure, tissue and function in models of chronic myocardial infarction and left ventricular volume overload. The research will be conducted both in Zurich and Paris.

The candidate holds a Master of Science degree in mechanical engineering or biomedical engineering with first class grades. He/she should have a keen interest in computational mechanics, signal and data processing and applications of cutting-edge imaging and modelling technology. Very good programming skills (Matlab, Python, C) and interest in both theoretical and practical work are a premise. An innovative spirit and team player skills round off the profile.

For further information about the position please contact Prof Sebastian Kozerke (kozerke@biomed.ee.ethz.ch) or Prof Martin Genet (martin.genet@polytechnique.edu).

Please submit your application online (use button below) including a cover letter, a detailed CV including grades of study and contact information of two referees. Please address your application to ETH Zurich, Ms. Maja Bügler, Human Resources, CH-8092 Zurich. The evaluation of applications will continue until the position is filled.