

**COMPUTATIONAL DIAGNOSTIC IMAGING AND COMPUTER – ASSISTED  
THERAPEUTIC INTERVENTION FOR CARDIOVASCULAR DISEASES**

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**Abstract**

During the past decades Medical Imaging has played major roles in computer-assisted diagnosis (CAD) for cardiovascular diseases. With the recent advances in computational capability, imaging is now increasingly moving from being a primarily diagnostic modality towards a therapeutic and interventional aid, facilitated by progresses in minimal access and robotic assisted surgery, along with the emergence of novel drugs and other forms of treatment. In line with these developments and the increasing trend in combining imaging with biomechanical and haemodynamic modelling, the requirement for computational imaging has now been moved to a new height. This article provides the retrospective accounts on its applications within the clinical setups as well as reviews the emerging trends on diagnostic/therapeutic imaging.

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