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Sommario/riassunto	In robotic beating heart surgery, a remote-controlled robot can be used to carry out the operation while automatically canceling out the heart motion. The surgeon controlling the robot is shown a stabilized view of the heart. First, we consider the use of directional statistics for estimation of the phase of the heartbeat. Second, we deal with reconstruction of a moving and deformable surface. Third, we address the question of obtaining a stabilized image of the heart.