

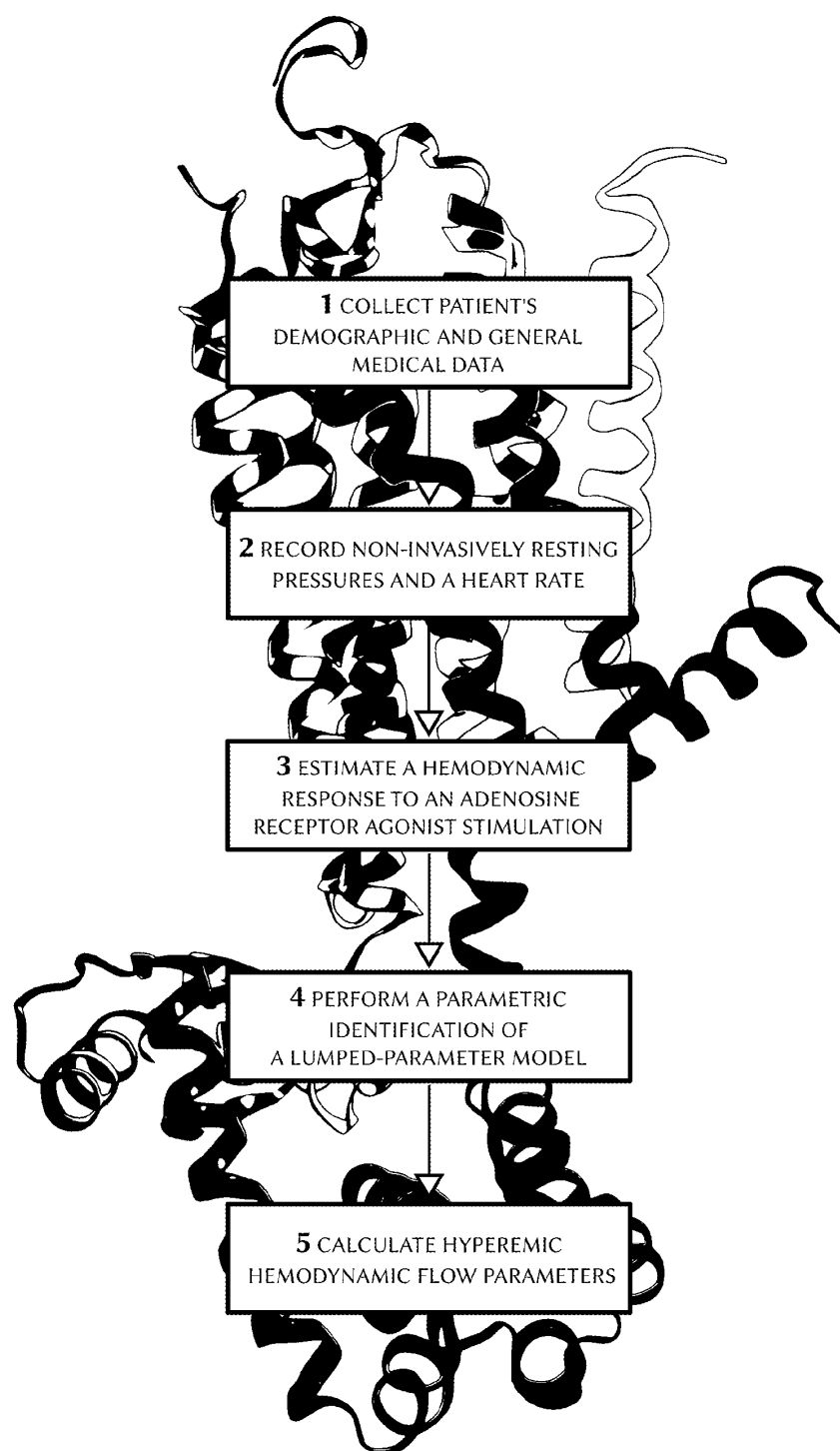
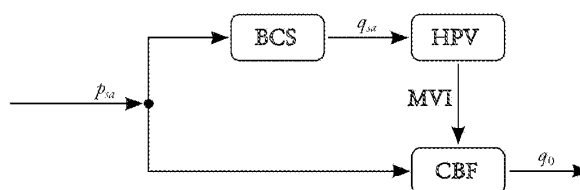


FIG. 1

(A) three-component model of coronary hemodynamics

BCS - blood circulatory system

HPV - heart pressure-volume

MVI - myocardium vessel interaction

CBF - coronary blood flow

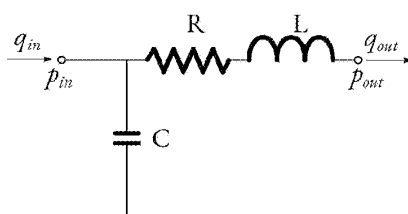
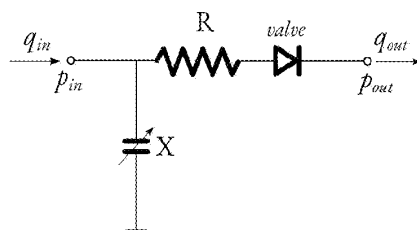
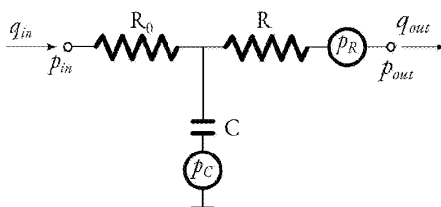
 p_{sa} , q_{sa} - central arterial pressure and flow rate (systemic artery) q_0 - flow rate in the inlet of coronary artery**(B) vascular compartment functional block CRL** p_{in} , q_{in} - pressure and flow rate at the inlet of compartment p_{out} , q_{out} - pressure and flow rate at the outlet of compartment R_0 , R , L , C - proximal and distal resistance, inductance and compliance p_C , p_R - myocardium vessel interaction (MVI) pressure (C-compliant and R-resistive arteries) X - time-varying elastance (E) or myocardial fibres stress and strain (MF) of heart chamber**(C) heart chamber functional block ERv****(D) coronary circulation functional block RCpRp**

FIG.2

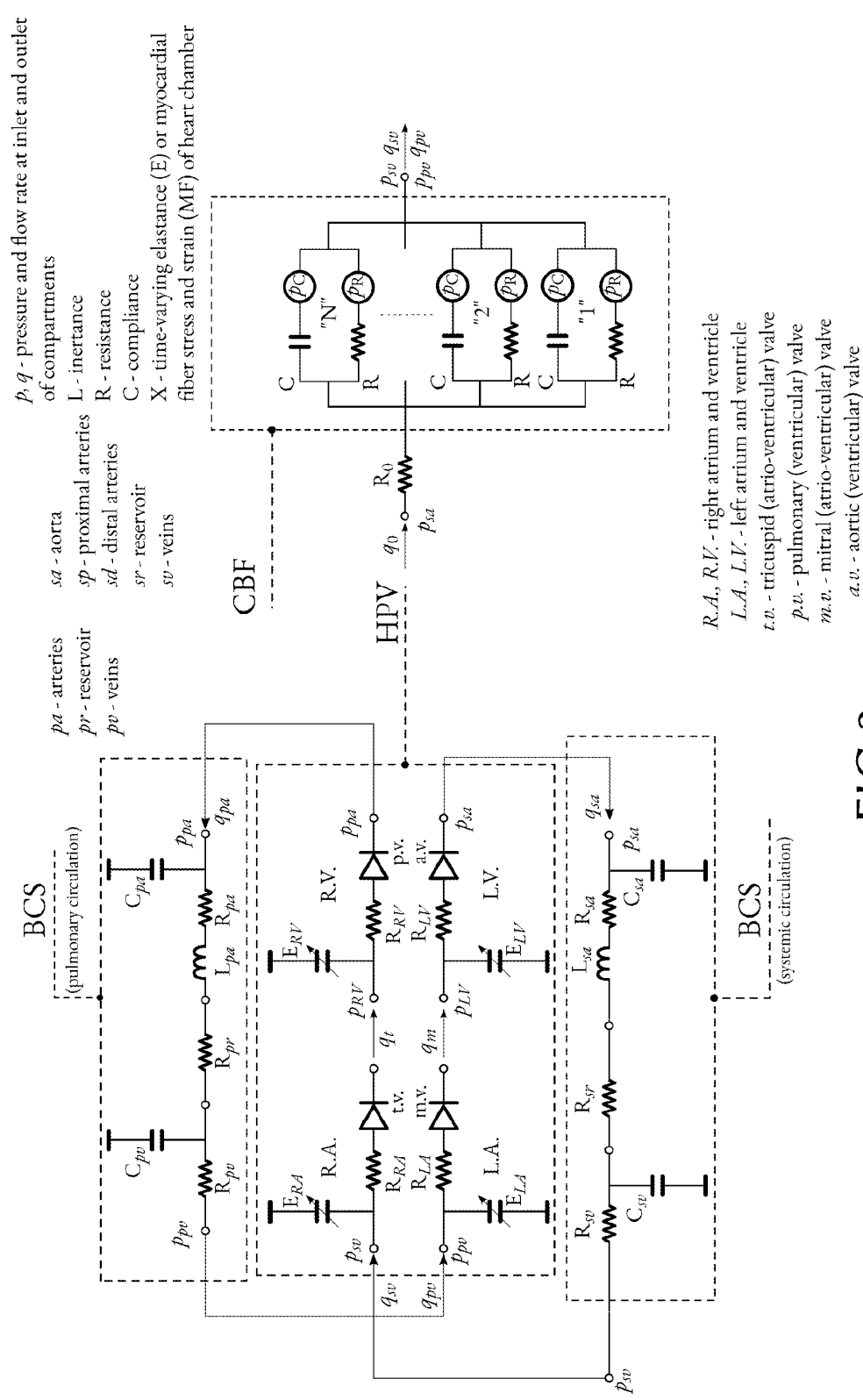


FIG.3

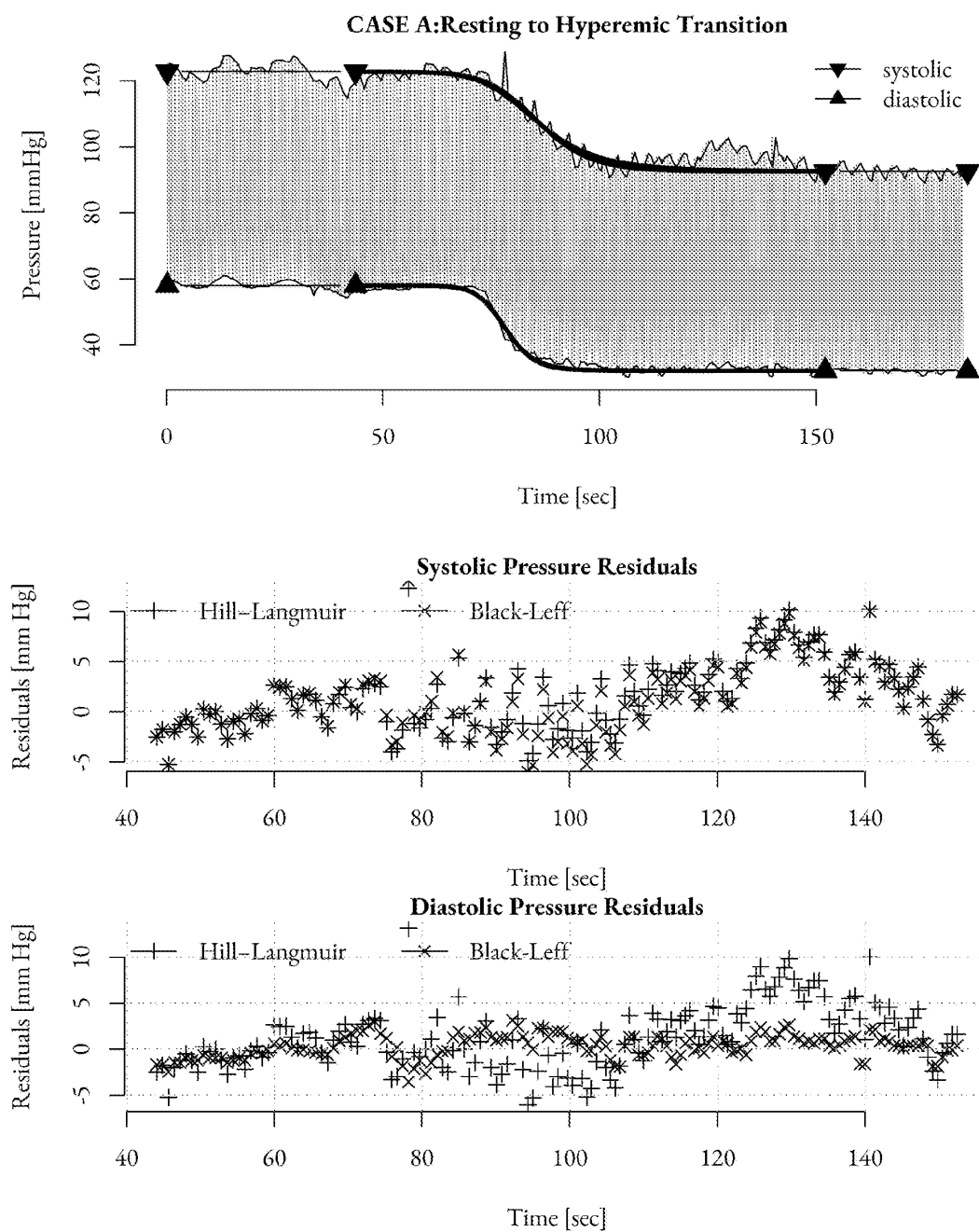


FIG. 4

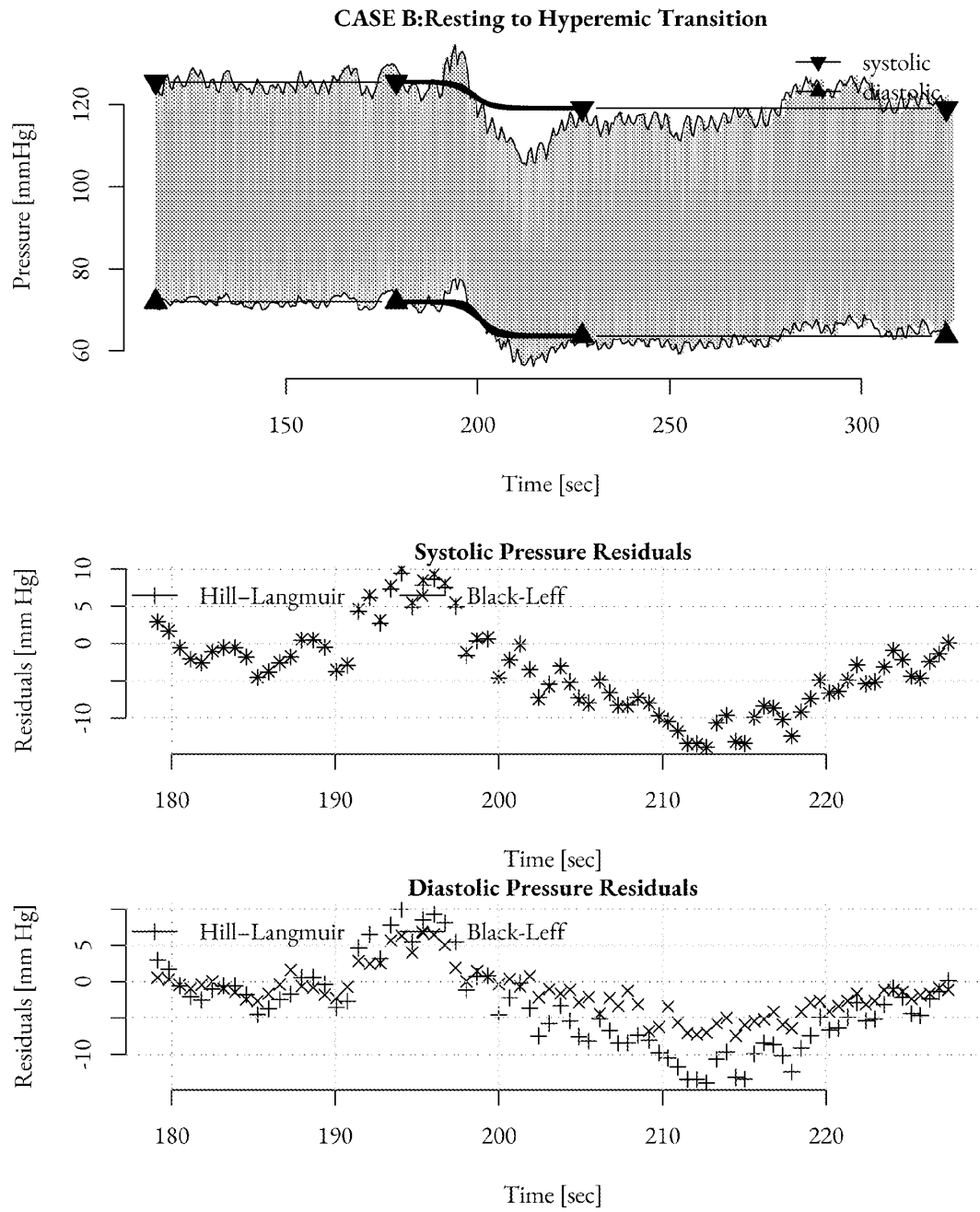


FIG. 5

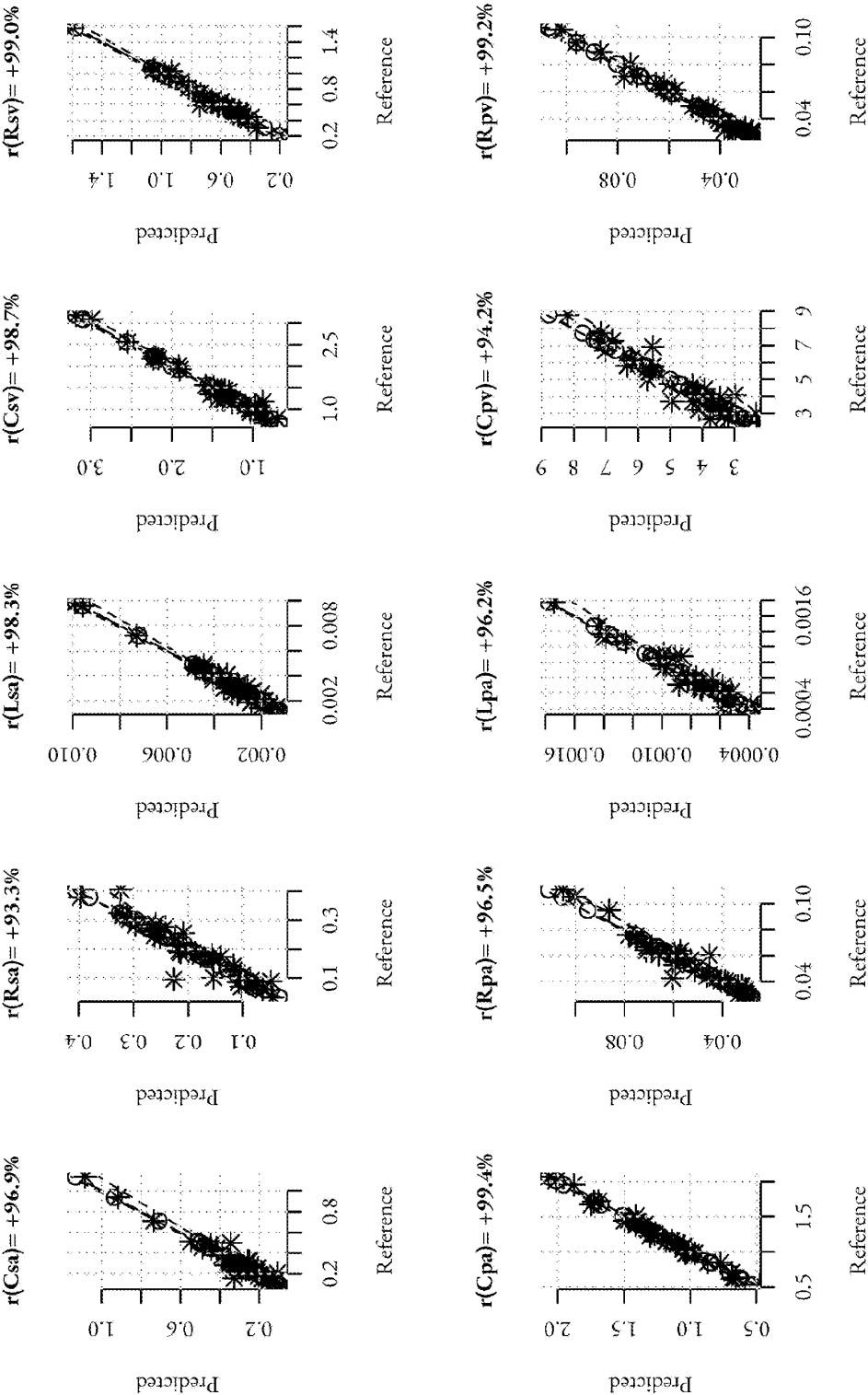


FIG.6

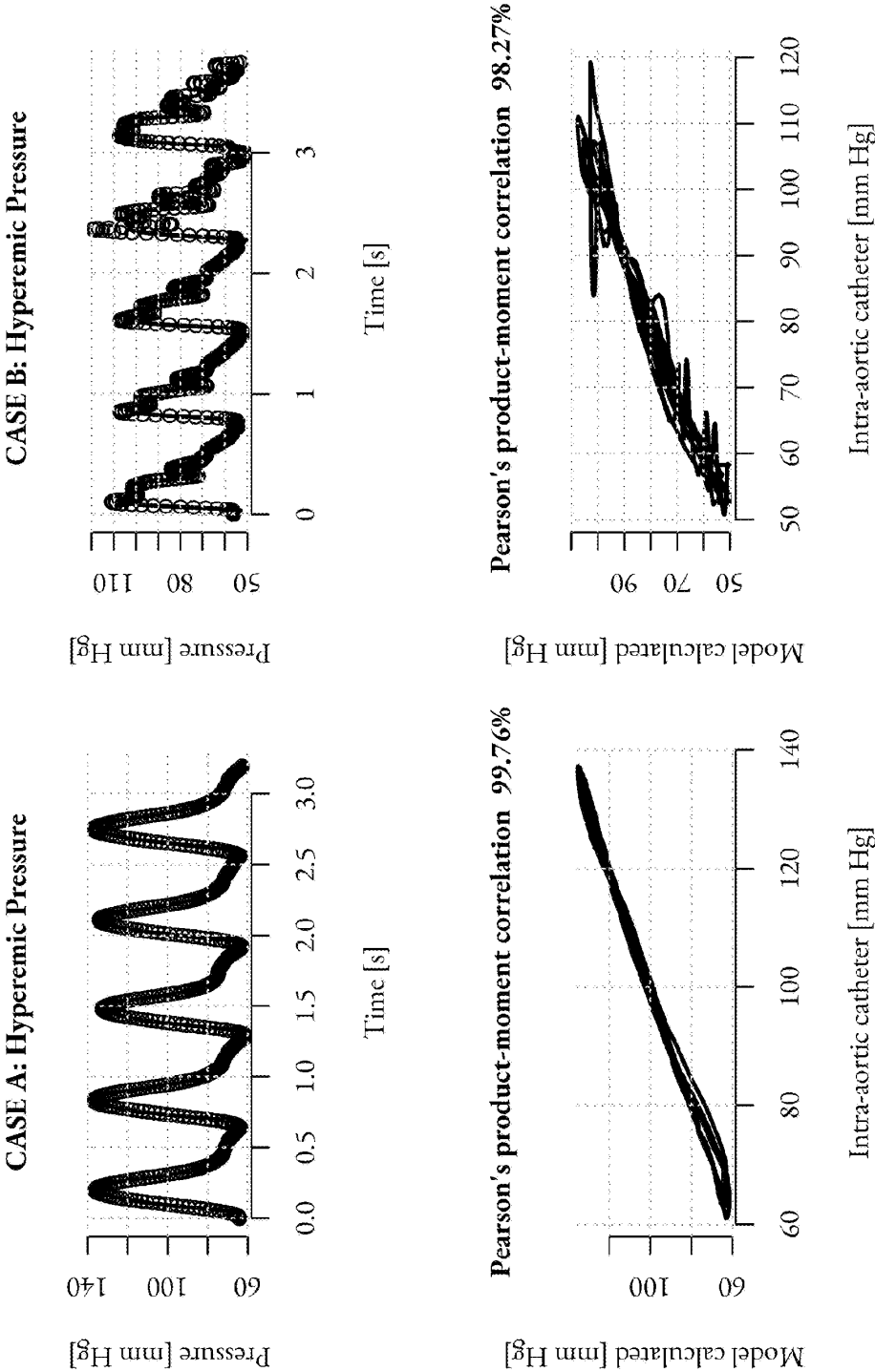


FIG.7