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Automated Tuning for Parameter Identification and Uncertainty Quantification in Multi-scale Coronary Simulations

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**Highlights**

- A framework is presented for automated tuning of lumped parameter network boundary conditions in cardiovascular simulations
- An automated Bayesian approach is employed, achieving excellent agreement with clinical targets
- The method is demonstrated using patient specific data for 6 coronary bypass patients and one normal
- Uncertainties are propagated to 3D simulation results to demonstrate success of the method in a multiscale framework.

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