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Editorial

40th Anniversary Issue: Reflections on papers from the archive on "Cardiovascular devices and modelling"

Cardiovascular disease is a leading cause of death and morbidity and places a significant burden on healthcare systems throughout the world. The papers selected for inclusion in this supplement exemplify the research activity into the devices and surgical procedures used in the treatment of diseases of the circulatory system that has appeared in *Medical Engineering & Physics* over the past 25 years. These include studies that focus on the pathophysiology of the cardiovascular system, congenital abnormalities of the heart and circulation, and the devices used to treat patients with these conditions, for example, coronary stents, prosthetic heart valves, ventricular assist devices, vascular grafts and prostheses. Advances in medical imaging, modelling and simulation techniques, and laboratory and clinical measurement techniques during this period has afforded researchers and clinicians the means to visualise, model and predict the structures and behaviour of the cardiovascular system in health and disease in ever increasing detail, including the pumping chambers of the heart and the foetal circulation *in utero*. An overview of how these advances are finding application in personalised medicine and clinical decision support is provided in the invited contribution that appears elsewhere in this special issue (Hose et al.).

Richard A. Black*
Gregor Houston
Department of Biomedical Engineering, University of Strathclyde, Glasgow, Scotland, UK

*Corresponding author.
E-mail address: richard.black@strath.ac.uk (R.A. Black)

Further reading

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