DESCRIPTION

A hands-on and practical roadmap to ultrasound technology for clinical practitioners who use it every day

In *Ultrasound Technology for Clinical Practitioners*, distinguished medical physicist and vascular ultrasound scientist Crispian Oates delivers an accessible and practical resource written for the everyday clinical user of ultrasound. The book offers complete descriptions of the latest techniques in ultrasound, including ultrafast ultrasound and elastography, providing an up-to-date and relevant resource for educators, students, and practitioners alike.

*Ultrasound Technology for Clinical Practitioners* uses a first-person perspective that walks readers through a relevant and memorable story containing necessary information, simplifying retention and learning. It makes extensive use of bulleted lists, diagrams, and images, and relies on mathematics and equations only where necessary to illustrate the relationship between other factors. Physics examples come from commonly known contexts that readers can relate to their everyday lives, and additional description boxes offer optional, helpful info in some topic areas.

Readers will also find:

- A thorough introduction to the foundational physics of ultrasound, as well as the propagation of the ultrasound pulse through tissue
- Comprehensive discussions of beam shapes, transducers, imaging techniques, and pulse echo instrumentation
- In-depth examination of image quality and artefacts and the principles of Doppler and colour Doppler ultrasound
• Fulsome treatments of measurement taking and safety and quality assurance in ultrasound

Perfect for sonographers, echocardiographers, and vascular scientists, *Ultrasound Technology for Clinical Practitioners* will also earn a place in the libraries of radiologists, cardiologists, emergency medicine specialists, and all other clinical users of ultrasound.

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**ABOUT THE AUTHOR**

*Crispian Oates* trained and entered the NHS as a Medical Physicist having studied physics as an undergraduate. From the beginning of his work as a Clinical Scientist in ultrasound he has been involved in teaching the physics and technology of ultrasound to sonographers and clinicians at three different universities. When the new NHS Scientist Training Programme (STP) began in 2011 he was on the committee which devised the physics and technology curriculum for the Vascular Ultrasound track on that program and was then solely responsible for implementing and running that curriculum for the STP course at Newcastle University. As well as teaching, throughout his career he has been a vascular ultrasound scientist running the Vascular Laboratories in Newcastle, Sunderland and Durham in the UK.

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