Intravascular Imaging: Current Applications and Research Developments

Vasilios D. Tsakanikas (University of Ioannina, Greece), Lampros K. Michalis (University of Ioannina, Greece), Dimitrios I. Fotiadis (University of Ioannina, Greece), Katerina K. Naka (University of Ioannina, Greece and Michaelideion Cardiology Center, Greece) and Christos V. Bourantas (University of Ioannina, Greece)

Limitations of angiography, the traditional invasive method for assessing vascular pathology, have led to an interest in alternative invasive techniques that visualize the arterial wall and allow characterization of plaque type. These alternative techniques, which include intravascular ultrasound, angioscopy, thermography, optical coherence tomography, near infrared spectroscopy, and intravascular magnetic resonance imaging are able to provide valuable information regarding plaque vulnerability, the composition of plaque, and luminal morphology.

Intravascular Imaging: Current Applications and Research Developments presents all available intravascular imaging techniques and analyzes their impact in clinical practice and research. This publication aims to inform medical specialists, biomedical engineers, bioinfomaticians, and researchers of current developments and future trends in intravascular imaging techniques, promoting continued evolution of this discipline.

Topics Covered:
- Angioscopy
- Fusion Methodologies and Intravascular Imaging
- Future Trends in Intravascular Imaging
- Implications of Intravascular Imaging
- Intravascular Magnetic Resonance Imaging
- Intravascular Ultrasound (IVUS)
- Near Infrared Spectroscopy
- Optical Coherence Tomography (OCT)
- Role of Rheology in the Atherosclerotic Process
- Thermography

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Vasilios D. Tsakanikas was born on 1st of January of 1983 in Agrinio, Greece. He graduated from the 1st High School of Agrinio in 2000. He received the Diploma Degree in Electrical and Computer Engineering in 2005 from the National Technical University of Athens, Greece. In his thesis, he performed an analysis of the established link between terminal mobile communication devices and users’ heads, utilizing the FDT.TD. (Finite Difference Time Domain) numerical method. He received a M.Sc. in Computer Science from the Athens University of Economics and Business, Department of Informatics, Greece in 2007. Today, he is working as Software Engineer on several biomedical projects.
Section 10: Future Trends in Intravascular Imaging

Chapter 20
Future Trends in Intravascular Imaging
Giannoglou George D. (AHEPA University General Hospital, Greece & Aristotle University of Thessaloniki Medical School, Greece)
Chatzizisis Yiannis S. (AHEPA University General Hospital, Greece & Aristotle University of Thessaloniki Medical School, Greece)

Chapter 21
Future Trends in 3D Intravascular Ultrasound (IVUS) Reconstruction
Giannoglou George D. (AHEPA University General Hospital, Greece & Aristotle University of Thessaloniki Medical School, Greece)
Antoniadis Antonios P. (AHEPA University General Hospital, Greece & Aristotle University of Thessaloniki Medical School, Greece)

Chapter 22
Future Trends in Coronary CT Angiography
Giannoglou George D. (AHEPA University General Hospital, Greece & Aristotle University Medical School, Greece)
Katsaras Sotirios A. (AHEPA University General Hospital, Greece & Aristotle University Medical School, Greece)

Chapter 23
Coronary Plaque Vulnerability
Giannoglou George D. (AHEPA University General Hospital, Greece & Aristotle University Medical School, Greece)
Koskinas Konstantinos C. (AHEPA University General Hospital, Greece & Aristotle University Medical School, Greece)

Order Your Copy Today!

Name: ____________________________________________
Organization: _______________________________________
Address: ________________________________ ____________ __
City, State, Zip: _____________________________________ __
Country: _______________________________ ____________ _ ___
Tel: ________________________________________________ __
Fax: _____________________________________________ __ ___
E-mail: ____________________________________________ __ __

☐ Enclosed is check payable to IGI Global in US Dollars, drawn on a US-based bank
☐ Credit Card ☐ Mastercard ☐ Visa ☐ Am. Express

3 or 4 Digit Security Code: _______________________________
Name on Card: _______________________________________
Account #: __________________________________________
Expiration Date: ______________________________________