Image-based Biomedical Systems Modeling and Control

Professor David Dagan FENG
FACS, FATSE, FHKIE, FIEE, FIEEE
Associate Dean - International IT, Faculty of Science
The University of Sydney
AUSTRALIA

Abstract
Recent advances in information technology and digital medical imaging have revolutionized biotechnology, biomedical research and healthcare. Functional imaging is a new technology that provides images of physiological and biochemical functions at the molecular level (molecular imaging), and provides the opportunity to accurately quantify a variety of physiological and biochemical events such as glucose metabolism, DNA synthesis and drug uptake that will prove indispensable in the application of the molecular approach to disease states, clinical diagnosis, treatment and assessment the response to the treatment. This talk will focus on some core theories and enabling techniques research in image-based biomedical systems modeling and control. Several clinical cases will be presented.

Biography
(David) Dagan Feng received his ME in Electrical Engineering & Computing Science (EECS) from Shanghai JiaoTong University in 1982, MSc in Biocybernetics and Ph.D in Computer Science from the University of California, Los Angeles (UCLA) in 1985 and 1988 respectively. After briefly working as Assistant Professor at the University of California, Riverside, he joined the University of Sydney at the end of 1988, as Lecturer, Senior Lecturer, Reader, Professor and Head of Department of Computer Science / School of Information Technologies. He is currently Associate Dean of Faculty of Science at the University of Sydney; Honorary Research Consultant, Royal Prince Alfred Hospital, the largest hospital in Australia; Chair-Professor of Information Technology, Hong Kong Polytechnic University; Advisory Professor, Chief Scientist and Chair of International Advisory Committee, Med-X Research Institute, Shanghai JiaoTong University; Guest Professor, Northwestern Polytechnic University, Northeastern University, Beijing Post & Telecommunication University, Xiamen University and Tsinghua University. His research area is Biomedical & Multimedia Information Technology (BMIT). He is the Founder and Director the BMIT Research Group. He has published over 500 scholarly research papers, pioneered several new research directions, and made a number of landmark contributions in his field. He is a Fellow of ACS, HKIE, IET, IEEE, and ATSE, and has served as Chair of IFAC Technical Committee on Biological and Medical Systems.

Visit http://www.it.usyd.edu.au/~bmit/feng.htm for more details.