List of Abbreviations

AAD  acquisition angle difference
ABOVA  anatomy-defined bifurcation optimal viewing angle
BMS  bare-metal stents
DBA  distal bifurcation angle
DICOM  digital imaging and communications in medicine
DMV  distal main vessel
ED  end-diastolic
DES  drug-eluting stents
EVA  expert viewing angle
IVUS  intravascular ultrasound
LAD  left anterior descending
LAO  left anterior oblique
LCx  left circumflex artery
LD  long diameter
LM  left main
MLD  minimum lumen diameter
OBOVA  obtainable bifurcation optimal viewing angle
OAV  observer agreement value
OCT  optical coherence tomography
OM  obtuse marginal
PBA  proximal bifurcation angle
PCI  percutaneous coronary interventions
PDA  posterior descending artery
PLA  posterolateral artery
PMV  proximal main vessel
PTCA  percutaneous transluminal coronary angioplasty
PVA  perspective viewing angle
QCA  quantitative coronary angiography
RAO  right anterior oblique
RCA  right coronary artery
RI  ramus intermedius
SB  sidebranch
SD  short diameter
SGLI  stick-guided lateral inhibition
SSV  sample scoring value
SVA  software viewing angle
UM  unsharp masking
XA  X-ray angiography
Publications

Journal papers


14. 刑栋, 杨丰, 黄靖, 涂圣贤, Dijkstra J. 结合硬斑块特征的心血管内超声图像中-外膜边缘检测. 中国生物医学工程学报. Accepted.
Abstracts


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Curriculum vitae

Shengxian (Sanven) Tu was born in Raoping, Guangdong, China on September 17, 1981. In 2000 he received his secondary school degree from Fengzhou Middle School in Raoping and started his bachelor study on Biomedical Engineering, at Southern Medical University (formerly known as First Military Medical University), Guangzhou, China. He received the bachelor degree in July 2005. In the same year, he was admitted by the Department of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China, as a master student, under the supervision of Prof. ir. Yazhu Chen and dr. ir. Su Zhang. He graduated in February 2008 with a thesis entitled "Image-guided targeting in treatment planning for focused ultrasound therapy" and was awarded the title “Shanghai Outstanding Graduate Student”. Right after his graduation, he joined the XA research group at the Department of Applied Research, Medis medical imaging systems as a scientific researcher, while at the same time pursuing a PhD degree at the Division of Image Processing (LKEB), Department of Radiology, Leiden University Medical Center, Leiden, the Netherlands, under the supervision of Prof. dr. ir. J.H.C. Reiber and ir. G. Koning. He has been working on the project of coronary vascular reconstruction from X-ray angiographic images and the fusion with intravascular ultrasound (IVUS) and optical coherence tomography (OCT), plus the use of 3D OCT for support of coronary interventions. The works are presented in this thesis and the algorithms were integrated into prototype software packages that were installed and validated in a number of hospitals around the world. At the early of 2011, he was awarded the “Outstanding Oversea Chinese Student” for his PhD study by the Ministry of Education of the People’s Republic of China.

Currently he continues his research and development on multi-modality imaging at Medis medical imaging systems. His research interests include image reconstruction, quantitative analysis, image fusion and image-guided therapy.