

ASSOC PROF YIYU CAI, Ph D
 College of Engineering & Institute for Media Innovation
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A. EDUCATIONAL QUALIFICATIONS

Ph D	National University of Singapore, 1996
MSc	Zhejiang University, 1990
BSc	Nanjing University, 1983

B. WORKING EXPERIENCE

Tenured Associate Professor	College of Engineering & Institute for Media Innovation, Nanyang Technological University (2008-present)
Program Director	Strategic Research Program of VR & Soft Computing, NTU (2004 – present)
Professor in Charge	Computer-aided Engineering Labs, School of Mechanical & Aerospace Engineering, NTU (2010 – present)
Deputy Director	Bio-informatics Research Centre, NTU (2005 – 2008)
Deputy Director	Nanyang Centre for Supercomputing and Visualization / Centre for Advanced Numerical and Engineering Simulation, NTU (2002-2005)
Supervisor	Computer-aided Design Lab, and Graphics Lab, NTU (2002-2006)
Project Leader	JHMS-ISS Joint Centre for Information-enhanced Medicine (1995-1997)

C. PROFESSIONAL EXPERIENCE

Co-President	International Simulation And Gaming Association (2009-2010)
Associate Editor	Journal Simulation And Gaming, SAGE Publisher (2006-present)
Associate Editor	International Journal of Virtual Reality, IPI Press (2004-2008)
Editor Board	International Journal of Computer Game Technology, Hindawi Publishing (2010 – present)
Editor Board	Transaction of Edutainment, Springer-Verlag (2008-present)
Guest-editors	International Journal of Virtual Reality, Journal of Simulation and Gaming, International Journal of Images & Graphics
Co-chairs	2012 & 2014 Asia-Europe Symposia on Simulation & Serious Games
Organizing Chair	19th ACM Symposium on Virtual Reality Software & Technology (2013)
Co-chair	40th Annual Conference of International Simulation And Gaming Association (2009)
Co-chair	3rd Asian Conference on Computer-aided Surgery (2007)
Conference Co-founder & Co-chairs	ACM SIGGRAPH International Conference Series on Virtual Reality Continuum and Its Applications in Industry (2004 & 2012)

D. EXTERNAL EXAMINERS

Examiner	National Science Center/Polish Research Funding Agency, Poland
Examiner	Research Grants Council of Hong Kong, Hong Kong
Examiner	Austrian Science Fund (FWF), Austria
PhD Dissert. Examiner	National University of Singapore, Singapore
MEng Dissert. Examiner	University of Malaya, Malaysia
PhD Dissert. Examiner	Chinese University of Hong Kong, Hong Kong
PhD Dissert. Examiner	University of Madras, India
PhD Dissert. Examiner	Zhejiang University, China

E. SELECTED PUBLICATIONS FROM OVER 100 TECHNICAL ARTICLES AND BOOKS

Y Cai & Simon See (eds.)	GPU Computing and Applications , Springer, Dec 2014.
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Y Cai & SL Goei (eds.)	Simulation and Serious Games , Springer, Dec 2013.
Y Cai (ed.)	3D Immersive & Interactive Learning, Springer, May 2013.
Y Cai et al (2013)	Design and Development of A Virtual Dolphinarium for Autistic Children, IEEE Transactions on Neural System and Rehabilitation Engineering 21(2):208-217.
P Chiang, JM Zheng, Y Yu, KH Mak, CK Chui & Y Cai (2013)	A VR Simulator for Intra-Cardiac Interventional Procedure: Concept, Design and Implementation, IEEE Computer Graphics & Applications (Jan/Feb 2013): 44-57.
Y Cai (ed.)	Interactive & Digital Media for Education in Virtual Learning Environment , Nova Sciences Publisher, New York, May 2011.
P Chiang, Y Cai, KH Mak, Ei Mon Soe, CK Chui, & JM Zheng (2011)	A geometric approach to the modeling of the catheter-heart interaction for VR simulation of intra-cardiac intervention, Computers & Graphics 35(5): 1013-1022.
W Chen, Y Cai et al (2010)	Kernel Modeling of Protein Surfaces using a Unified Representation, Computer-Aided Design 42(4): 267-278.
Y Cai & JM Zheng (eds.)	VR in Medicine, International Journal of Virtual Reality (2009)
I Chandrasekaran, Y Cai et al (2007)	Virtual Reality Prototyping of Bio-molecules, Journal Virtual and Physical Prototyping 2(1): 37 – 49.
Y Cai & J Brown (Eds.)	VR Simulation & Gaming , Journal of Simulation and Gaming (2006)
Y Cai et al (2006)	Tactile VR for Hand-eye Coordination in Simulated PTCA, Computers in Biology and Medicine 36(2): 167-180
J Zheng & Y Cai (2006)	Interpolation Over Arbitrary Topology Meshes Using a Two-Phase Subdivision Scheme, IEEE Transactions on Visualization and Computer Graphics 12(3): 301-310.
Y Cai et al (2003)	VR simulated training for less invasive vascular intervention, Computers & Graphics 27(2): 215-221
X Ye, Y Cai et al (2002)	Constructive modeling of G1 bifurcation, Computer Aided Geometric Design 19(7): 513 - 531.

F. SELECTED PATENTS

Y Cai et al	Method for Intelligent Lifting, PCT Patent (filed in Oct 2014).
J Anderson, C Chui, Y Cai, et al	Simulation Method For Designing Customized Medical Devices, US Patent 7371067 (granted in 2008).
J Anderson, C Chui, X Ma, Y Wang, Y Cai et al	Advanced simulation for cardiovascular image guided therapy, US & International Patent Pending (71699/56492).
C Chui, P Chen, Y Wang, M Ang, Y Cai et al	Apparatus for the simulation of image-guided surgery, US Patent 6538634 (granted in 2003)

G. SELECTED RESEARCH GRANTS OF TOTAL NEAR \$10M

Principal Investigator	Virtual Pink Dolphins, funded by Singapore Millennium Foundation
Principal Investigator	Intelligent Crane Lifting, funded by PEC Limited.
Principal Investigator	FutureSchools@Singapore, funded by National Research Foundation, Ministry of Education, & Infocomm Development Authority of Singapore.
Principal Investigator	Media in Learning, funded by MDA of Singapore.
Principal Investigator	Bio Visualization and Virtual Reality, funded by Science and Engineering Research Council, A*STAR
Principal Investigator	3D Cellular Image Processing, funded by Singapore Bio-imaging Consortium, A*STAR
Principal Investigator	Mobile Immersive Theatre, funded by Minister of Information, Communication and The Arts.
Co-Investigator	Advanced research on T-spline and Application, AcRF Tier-2, funded by Ministry of Education
Core Member	BeingThere & Tele-presence, funded by National Research Foundation