The Feasibility Study of Mobile-to-mobile Communication for Auscultation of Heart Sound and Lung Sound

Bing-Yuh Lu**, San-San Sing**, Huey-Dong Wu***, Ling-Yuan Hsu****, Jin-Shin Lai***

*Department of Electronic Engineering, Tunghn University, New Taipei City, Taiwan, ROC
**Department of Business Administration, National Taipei University of Business, Taipei, Taiwan, ROC
***National Taiwan University Hospital, Taipei, Taiwan, ROC
****Department of Information Management, St. Mary’s Junior College of Nursing, Medicine, and Management, YiLan, Taiwan, ROC

Biography

Bing-Yuh Benjiamin Lu received his BS degree in electrical engineering from National Central University and his MS and PhD degrees in electrical engineering from National Taiwan University in 1988, 1993, and 2000, respectively. He was an instructor at the Department of Electronic Engineering, Tunghn University in 1992, and became an associate professor at the same department in 2000. He joined the Department of Information Management, St. Mary’s Medicine, Nursing, and Management College, Yi-Lan, Taiwan, Republic of China in 2011, and served as an associate professor and the department head in the duration of 2011 to 2013. He is currently an associate professor in Department of Electronic Engineering, Tunghn University, New Taipei City, Taiwan, Republic of China. He is interested in computer simulation, medical engineering, acoustics, lung sound and educational researches. He is a member of IEEE. His academic interests in focus on acoustics, medical engineering, computer simulation, educational applications of engineering, and pulmonary signal processing.

San-San Sing received her Ph. D. degrees in Business Administration from National Taiwan University of Science and Technology. She is an associate professor at Department of Business Administration, National Taipei College of Business. Her researches include marking, and applications of international barcode for products.
Huey-Dong Wu was graduated with a M.D. degree from Medicine Department of National Taiwan University in 1984. He received resident training in National Taiwan University Hospital (NTUH) and trained as visiting scholar in ULCA later. He service in the Department of Internal Medicine and Department of Integrated Diagnostic & Therapeutics in National Taiwan University Hospital (NTUH) till now. He is the chief of the division of Respiratory Care, NTUH. His academic interests in focus on respiratory care, pulmonarsiology and pulmonary signal processing especially about lung sound and pulmonary mechanism.

Ling-Yuan Hsu was born in I-Lan, Taiwan, R.O.C., in 1975. He received the M.S. degree in computer science and information engineering from National Dong Hwa University, Hualien, Taiwan, in 2004, and Ph.D. degree in computer science and information engineering at National Taiwan University of Science and Technology, Taipei, Taiwan, in 2013. Currently, he is an assistant professor in the Department of Information Management of ST. Mary’s Medicine, Nursing, and Management College. His research interests include artificial intelligence, image processing, evolutionary computation, and computer networks.

Jin-Shin Lai was born in Taipei, Taiwan, Republic of China (R.O.C.) in 1949. He received the M.D. degree from the Medical School of National Taiwan University, Taipei, Taiwan in 1974. He completed residency training in the Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, Taiwan in 1978. He was a Lecturer, Associate Professor, and Professor of Medical School, College of Medicine, National Taiwan University in 1980, 1984 and 1996, respectively. Now, he is the Director of Health Science and Wellness Center, National Taiwan University and Director of Sports Medicine Center, National Taiwan University Hospital. His professional interests include medical informatics, sports medicine, rehabilitation medicine, biomechanics, and rehabilitation engineering. He and his research group had published a series of studies about Physiological Effects of Tai Chi Chuan Training. Prof. Lai has been the Chairman of School of Rehabilitation Medicine (1988-1992), Chairman of School of Occupational Therapy (1992-1998), Chairman of Department of Physical Medicine & Rehabilitation (1993-1999), Chief of Division of Medical Informatics (2001-2007), College of Medicine, National Taiwan University, respectively. He also served as the Chairman of Department of Information Technology & Service, National Taiwan University Hospital (1998-2004), and elected as the President of Rehabilitation Medicine Association of Taiwan (R.O.C.) 1993-1999, the President of Sports Medicine Association of Taiwan (R.O.C.) 1997-2001, the Chairman of Scientific Commission of Asian Federation of Sports Medicine (AFSM) 1990-2000, the Treasurer of Asian Federation of Sports Medicine (AFSM) 2001-2004 and the Chair of HL-7 Taiwan (2005-2009).