

Plenary lecture IV : Artificial Intelligence and Point of Care Ultrasound: Benefits, Pitfalls and Future Impact

時間：2021 年 10 月 27 日(三) 11:00~11:30

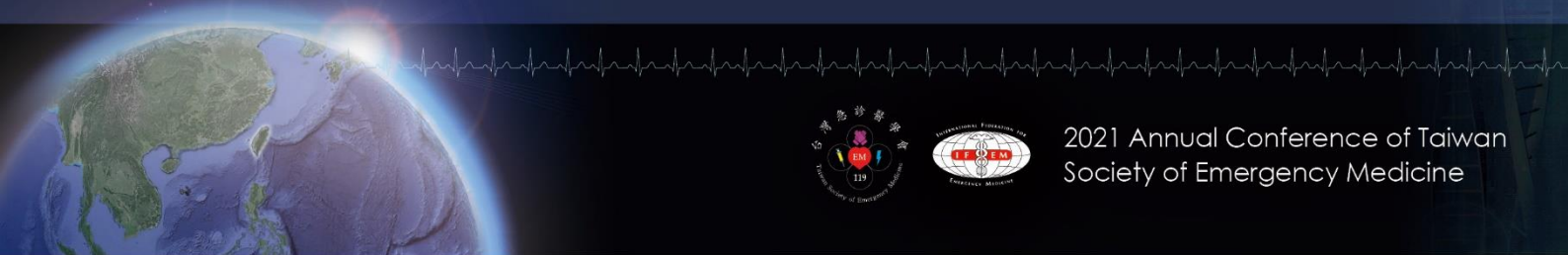
會議室：Room 1

主持人：周志中醫師(彰化基督教醫院)、林韋均醫師(中國附醫)

主講人：Michael Blavias, MD, MBA, FACEP, FAIUM
(University of South Carolina School of Medicine)

課程簡介

Artificial Intelligence is making significant impact on daily life, but has affected medicine as well. Image analysis is of particular interest to developers and while most AI development has focused on radiology and cardiology, researchers and companies alike have now turned their attention to POCUS users as the future of medical ultrasound spread. The impact AI will have on POCUS is much more significant than in cardiology and radiology, in part because of much greater reach to the patient's bedside but also due to much higher need. Multiple academic studies have proven the success of AI applications in POCUS and related fields. However, both research studies and real world experience have uncovered multiple challenges faced in AI implementation for POCUS. These limitations should be known by all prospective users and kept in mind by developers when trying to bring products to market. This lecture will cover the basics of POCUS AI functionality and development as well as current and upcoming applications. Finally, the future impact of AI on POCUS will be discussed.



Michael Blaivas, MD, MBA, FACEP, FAIUM
University of South Carolina School of Medicine

Dr. Blaivas completed an emergency medicine residency at the University of Michigan Medical Center, followed by an emergency ultrasound fellowship at Christ Hospital and Medical Center in Chicago (University of Illinois). He has held faculty positions in multiple universities and is currently a professor of medicine (affiliate) at the University of South Carolina, School of Medicine. Dr. Blaivas is a pioneer of point-of-care ultrasound having published over 230 peer reviewed articles on point-of-care ultrasound, multiple book chapters and is the editor of 6 medical textbooks. His research interests over the years have spanned from resuscitation, lung ultrasound, out of hospital and space applications of ultrasound through ocular ultrasound, ultrasound guided procedures such as vascular access and regional nerve blocks as well as bench research. Dr. Blaivas has been active in multiple medical societies and is a founding member of the World Interactive Network For Critical Ultrasound (WINFOCUS) and Society of Ultrasound in Medical Education (SUSME), having served as president of both. Dr. Blaivas was the founder and first editor of The Ultrasound Journal for WINFOCUS and now serves as deputy editor of the Journal of Ultrasound in Medicine and JACEP Open Journal. Dr. Blaivas has been the emergency ultrasound section chair for ACEP, SAEM and AIUM. He has recently finished two terms as American Institute of Ultrasound in Medicine (AIUM) third Vice President. Dr. Blaivas is active in building educational and policy-making relationships between societies in a variety of medical specialties throughout the world. Dr. Blaivas has worked with specialty societies such as the AIUM and Society of Critical Care Medicine to help craft ultrasound educational and performance standards and guidelines. He has served on the board of the World Federation of Ultrasound in Medicine and Biology (WFUMB) and continues to work on point of care ultrasound education and research around the world. Most recently, Dr. Blaivas has created and directed, the American College of Physicians (ACP) pre-congress ultrasound course which is helping to expand ultrasound use by internal medicine physicians. He has also been active in medical device and software development, working with multiple companies over a twenty year period. Dr. Blaivas has completed multiple courses in programming and developing Artificial Intelligence/Deep Learning applications in image recognition. He has published multiple peer reviewed journal articles on Deep Learning applications in POCUS and continues to work on an increasing number of collaborative AI research studies with colleagues around the world. For four years, Dr. Blaivas served as Chief Medical Officer of EchoNous Inc, an AI and Hand Carried Ultrasound company based in Redmond Washington. He has also served as the Chief Medical Officer for Ava Ag, a mobile sensor, AI and mobile app company based in Switzerland. Currently Dr. Blaivas serves as the Chief Medical Officer of Anavasi Diagnostics, a point of care molecular Covid diagnostics company, while continuing to pursue multiple academic ventures including research, education and patient care. He also serves as Chief Medical Officer of HERO Medical Technologies, a mobile sensor and AI application medical technology company. Dr. Blaivas is also vice-chairman of the American Institute of Ultrasound in Medicine, Artificial Intelligence Community of Practice.