

Executive CV – Conjoint A/Professor Alwin Chuan, MBBS PhD PGCertCU FANZCA

I am a clinician-researcher in anaesthesia and pain medicine. Clinically, I am a senior specialist in the Department of Anaesthesia, Liverpool Hospital, South West Sydney Local Health District, Australia.

Academically my PhD was conferred in 2016 with a thesis by publication on ultrasound-guided regional anaesthesia. My postdoctoral research output is ongoing interests in regional anaesthesia, medical education, ultrasonography, orthopaedics, hip fracture and chest trauma, and perioperative outcomes. I was appointed Conjoint Associate Professor with the University of NSW, Sydney in 2017 (South West Sydney Clinical School).

I regularly conceptualise, design, and lead multinational, multidisciplinary, multicentre, randomised controlled trials in anaesthesia. I have received over \$4 million in peer-reviewed competitive research grants from the NHMRC, MRFF, ANZCA, and the ASA. As of May 2024, my research metrics are (Google Scholar): 65 publications, 1 co-authored textbook (Oxford Pocketguide to Regional Anaesthesia), 3 textbook chapters, >2000 citations, h-index 22, Field-Weighted Citation Index of 2.63 (ie. 260% more citations than other anaesthesia researchers). My most recent research innovations has been in the use of virtual reality in regional anaesthesia (design, validation, and learning outcomes of a bespoke VR simulator to teach ultrasound-guided needling skills) and virtual reality for analgesia (design, validation, and use of a bespoke VR application for cancer-related chronic pain, and for acute perioperative procedural pain).

My research has been cited and used to formulate national guidelines for hip fracture management by the NSW Agency for Clinical Innovation (fascia iliaca blocks) and by the NHS (reduction of postoperative delirium, as well as the use of echocardiography for bedside preoperative assessment); Australian and New Zealand recommendations for Fellowship training in regional anaesthesia; a global curriculum in regional anaesthesia; and in professional documents by the College of Anaesthetists (decontamination of ultrasound equipment). I am a collaborator in other major projects that have an impact on international guidelines (ASRA/ESRA recommendations on nomenclature, regional anaesthesia documentation, and on training and education in regional anaesthesia).

I am actively involved in undergraduate and postgraduate medical teaching. I have supervised 14 UNSW Bachelor of Medical Science honours students to completion, and was clinical supervisor for >30 provisional fellows in regional anaesthesia since 2008. 18 of my previous students and fellows have co-authored peer reviewed journal publications whilst I was their supervisor.

I am a regular national and international keynote and invited speaker, and sought out as a key opinion leader in my field. My highlight invitations include: Australian Society of Ultrasound in Medicine annual meeting, European Society of Regional Anaesthesia congress, American

Society of Regional Anaesthesia congress, American Society of Anaesthesiology congress, Australian and New Zealand College of Anaesthetists annual meetings, Australian Society of Anaesthesia national congress, World Congress of Anaesthesia, and the Chinese Society of Regional Anaesthesia. I have been on the consultation board of GE Healthcare and Fujifilm SonoSite, to advise them on clinical aspects of new technologies in ultrasound.

I have been appointed to national and international leadership positions. Highlights have included: chair of the Research Prizes and Grants committee, Australian Society of Anaesthetists since 2022; Anaesthesia lead, NSW Health ACI Hip Fracture Care group since 2021; Board of Directors, Asia-Oceania Society of Regional Anaesthesia and Pain Medicine since 2023; was inaugural chair of the Education Special Interest Group of the American Society of Regional Anesthesia (2018-2021); and foundation member of the executive committee, Australian New Zealand Regional Anaesthesia special interest group (since 2008). I founded the Provisional Fellowship program in perioperative ultrasound in anaesthesia, which was the first established program in Sydney (2008), and continue to be director of the program.