

Arttu Luukanen

Multi-band submillimetre-wave imaging - a journey from applied research to commercialization of novel technologies

After years of research on submillimetre-wave detectors and systems in Finland and elsewhere, Asqella has commercialized a passive multi-band video camera operating in the submillimetre-wave range, representing the culmination of 10+ years of applied research. In this talk we will describe what are the essential elements in maturing new technologies from the research phase to commercial products. We will also present multi-band passive imagery acquired with the system and discuss the phenomenology associated with this type of imaging.

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Arttu Luukanen (born 1972, native of Finland) received his M.Sc. degree from the University of Helsinki, and his PhD from the University of Jyväskylä, Finland, also in applied physics. From late 2003 until 2005 he worked as a guest researcher at the National Institute of Standards and Technology in Boulder, Colorado, U.S.A. In 2005, he was appointed as the director of MilliLab – the Millimetre-wave Laboratory of Finland, and in 2009 as a Research Professor of Micro and Nanosystems at VTT. From 2007 until 2012, Dr Luukanen served on the International Advisory Board of the Swedish FOI-FOCUS Centre of Excellence on Sensors, Multisensors and Sensor networks, and from 2013 onwards on the International Advisory Board of the Chalmers GHz Centre. In 2013 he co-founded Asqella Ltd to commercialize passive multi-band submillimetre-camera technology, a long time focus of his research. Currently, Dr Luukanen serves as the Managing Director of Asqella. He is also an elected member of the Finnish Academy of Technical Sciences. His current research interests include mm-wave and THz devices, circuits and imaging systems.

