NON-DESTRUCTIVE TESTING SOCIETY (SINGAPORE)
9, Jurong Town Hall Road, #02-21, Singapore – 609431
Tel: +65-62570370 **/** Email: membership@ndtss.org.sg /**www.ndtss.org.sg**

Technical Seminar / SFCW Ground Penetrating Radar – A paradigm shift in utility mapping

Presented by: Dr Sanjay Rana

VENUE : Online / Webinar

Organizer : AF Academy, India/ Screening Eagle Technologies

DATE : Thursday, 9th September 2021

TIME : 5.30pm Singapore time

Cost : Free of charge

Link (For Members only) **:**

https://www.afacademy.org/events/sfcw-ground-penetrating-radar-a-paradigm-shift-in-utility-mapping

Non-Member to email to M S Vetri, Chair, Membership for registration membership@ndtss.org.sg

Registration Deadline : 5.00PM (9 September)

Don't miss the opportunity. Register early. Any doubt, email to membership@ndtss.org.sg

ABSTRACT

SFCW Ground Penetrating Radar- A paradigm shift in utility mapping

Having accurate knowledge of subsurface/ underground/ buried utilities e.g. pipes, cables, drains is critical for any infrastructure project. The successful detection and mapping of buried utilities involves the combination of several techniques, the results of which are synthesized down to a single interpreted plot. The techniques and methodologies used will primarily depend upon the required outcome for the survey, the site conditions and the type of utilities being targeted.

Ground Penetrating Radar (GPR) is an important tool for subsurface utility mapping due to its capability to map metallic and non-metallic utilities in 3-dimensions. Till recently, most of commercially available GPRs were Impulse Radars. The recent commercial availability of Stepped Frequency Continuous Wave (SFCW) Radars has significantly improved the quality of data that can be obtained during utility mapping projects. Unlike Pulsed-GPR which broadcast a signal centred around one frequency, resulting in a trade-off of resolution and depth for inspecting, SFCW broadcasts an ultra-wide-band range of modulated frequencies. The combination of all frequency response enables detection of objects from shallow to deep depth in one scan.

The workshop will comprehensively cover all the aspects related to conducting a successful underground utility detection and mapping project, with special emphasis on the huge difference made by use of SFCW GPR under Quality Level- B. The added value of using advanced software and cloud computing will also be described.

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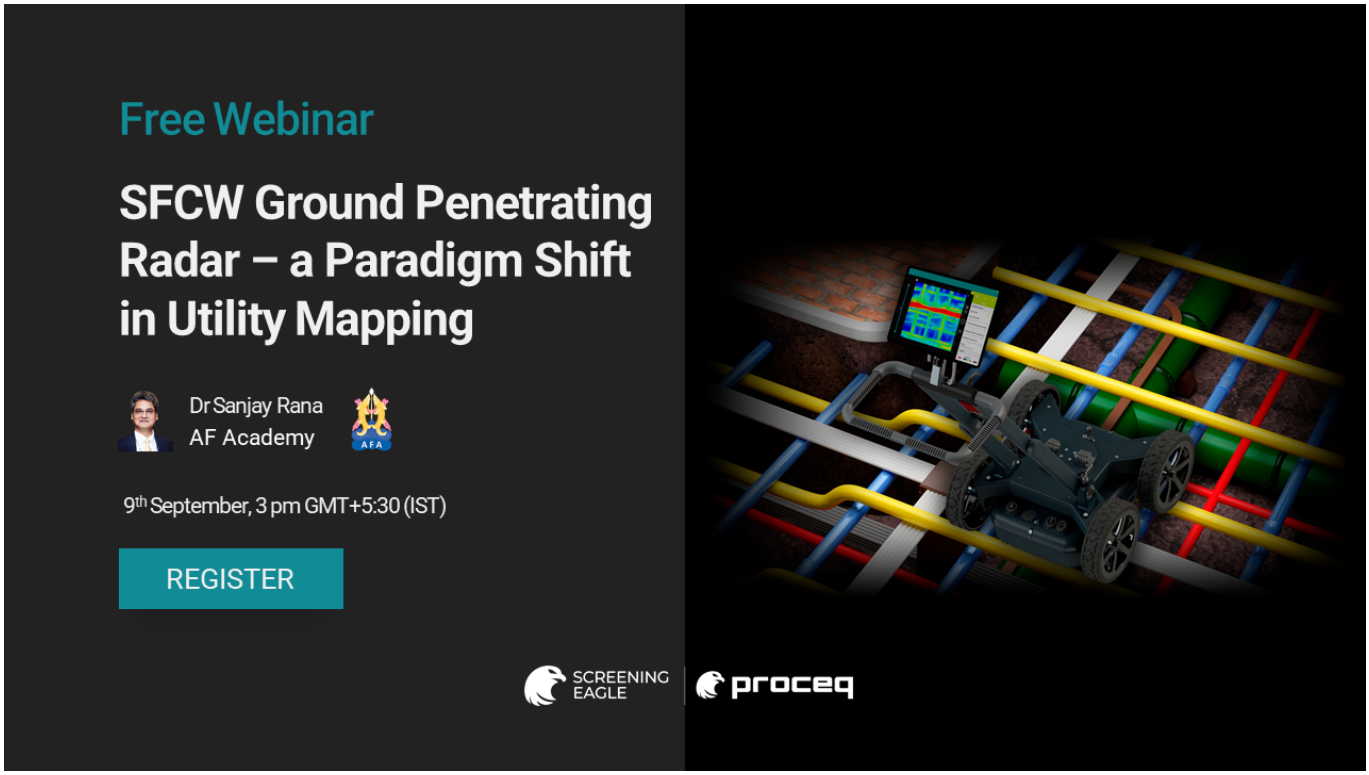
About the speaker:

Dr Sanjay Rana is a geophysicist by profession, an environmentalist at heart and a trainer by passion. Dr Rana graduated in 1990 from the University of Roorkee, now IIT Roorkee, in M Tech (Applied Geophysics), as Gold Medalist. After working for 5 years with the state and central government (Department of Atomic Energy), Dr Rana started the first-ever engineering geophysics company in the private sector in India. Since 1995 he has been working tirelessly towards the growth of the geophysical industry in India, exploring new & unique application areas in various fields like Hydropower, dam safety, oil & gas, mining, infrastructure, roads & highways etc.

Dr Rana has given many training courses and lectures for professionals and has authored various papers and standards.



Thanking you, For & Behalf of NDTSS

Dr. S K Babu
President, NDTSS