

## Webinar

# Talk on What's up in Oil & Gas Industrial Research #3 : Ears on Wells – A Multi Fiber Optics Sensor System for Oil and Gas Application

CPD Hours : 2

CPD Ref No : IEM22/HQ/157/T(w)

Oil, Gas and Mining Technical Division

## SYNOPSIS

When the word “research” is mentioned, it is often a misconception that research happens inside universities and researchers will work in the campus, isolated from the industrial world. It is not the case since research also happens in the industry, and most often than not, shaping the demand of technology advancement.

Oil, Gas, Mining Technical Division (OGMTD) has lined-up a series of research-focused topics to explore the current trend in Oil & Gas research, to bring awareness of research work in the industry, which could shape the current and future engineering applications or solutions.

This is the 3rd series:

### a) Multi Fiber Optics Sensor System for Oil and Gas Application

Mention fiber optic technology, and the first thing that cross our mind is its application in transmitting data in the telecommunications industry. In fact, the application of fiber optic goes beyond what we normally know. It has been used widely in the oil and gas industry in the form of distributed temperature sensing (which is already an established well monitoring technique). There are other ways it can be applied as part of the industry's continuous quest to explore and produce hydrocarbons safely and efficiently. The most recent of these applications is by utilizing fiber optics for distributed sensing, or in simple terms, as ‘listening’ devices along the wall of a well or pipeline.

Fiber optic cables can be installed inside a well and along pipelines – allowing us to monitor in real time the flow of hydrocarbons, if there is bypass oil, and detect leakages or problems on the pipeline by pinpointing the exact location of the leak or problem area.

## SPEAKER

### Dr. Ahmad Riza Ghazali

**Dr. Ahmad Riza Ghazali** is a Chief Scientist at the Group Research & Technology, PETRONAS. He earned his Bachelor of Science at University of Leicester, UK, in 1998, and received his PhD from Faculty of Applied Physics, Technical University of Delft, the Netherlands in 2011. He has over 24 years of experience in oil and gas industry especially in geophysics, exploration and R&D technology development. He developed seismic imaging algorithms for hydrocarbon prospecting and advises various technology projects for PETRONAS including multi-fiber optics sensor system. He holds several patents in these fields. He is recently appointed as the member of Scientific Advisory Committee for Sultan Mizan Antarctic Research Foundation (Malaysia Polar Research - agency of Ministry of Environment and Water, Malaysia). He is an active member of EAGE and sits as the Society of Exploration Geophysicists (SEG) Board Member for District 12 Representative and as Advisory Panel for SEG Asia Pacific.



**Saturday | 18 June 2022 | 9AM – 11AM**

**Registration Fee:**

**Student Member: Free | IEM Member: RM15 | Non-Member: RM70**

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