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Department of Physics  
Faculty of Mathematics and Natural Sciences  
Universitas Indonesia

## WEEKLY SEMINAR

# GeoSlicer-X: An Interactive Software Developed by UI Geothermal Research Group for Analyzing Geoscientific Data in 3-D Visualization



### Brief Profile

Dr. Eng. Yunus Daud is a geothermal academician and expert in Indonesia. He has more than 20 years experience in geothermal exploration, resource assessment as well as research in development of geophysical technology and software. He is an author of many scientific published papers. He is also an owner of 5 patents in Geoscientific Software Development, including GeoSlicer-X software. He is also an expert member of Directorate of Geothermal, Ministry of Energy and Mineral Resources, Republic of Indonesia. Currently, he has been an advisor in geothermal companies such Hitay Energy Holdings (Turkey), Medco Power, PLN, Indonesia Power, 3JTEch (Taiwan), etc.

### Abstract

GeoSlicer-X is an interactive, multi-platform data analysis software developed to help geoscientists and engineers in analyzing geoscientific data in three-dimensional visualization. The software has been developed by our UI Geothermal Research Group (UI-GRC) using Graphical User Interface (GUI) facility of MATLAB. In order to construct user friendly environment of data analysis, 3D model of extensive scientific data is produced in form of static (still) or dynamic (animated) images. Data correlation and analysis could be performed by utilizing qualitative and quantitative features within the software. Recently, the major implementation of GeoSlicer-X is to help geoscientists and engineers in analyzing geoscientific data with (X, Y, Z, Value) format input data. This software was first launched and published in the World Geothermal Congress (WGC) 2010 in Bali. Since then the software has been applied in many geothermal fields in Indonesia and Malaysia for analyzing geoscientific data such as geology, geochemistry and geophysical data, as well as reservoir modeling and simulation. This software has also been used as a visualization tool of other UI-GRC software products such as MT3DMod-X, MT3DInv-X (3D EM data modelling and inversion), MT2DMod-X and MT2DInv-X (2D EM data modelling and inversion). In addition, this software has also been applied for visualizing 3-D data format from Material Science Research Group of the Department of Physics, Universitas Indonesia. Other research group is also possible to utilized this software as far as the (X,Y,Z,Value) data is available. Recently, a joint research between our group with a New Zealand database software developer has been ongoing for integrating their GeoData Manager software with the GeoSlicer-X software, so that the geothermal database could be envisioned in 3-D visualization.

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**18**  
**Wednesday**

**Apr**  
**2018**



13.00 – 15.00 WIB



Main Seminar Room, Dept. of Physics, FMIPA UI, Depok

This seminar is open to the public (students, lecturers, researchers, etc.) and free of charge