

**USC CENTER FOR GEOTHERMAL STUDIES (CGS)  
DISTINGUISHED LECTURE PROGRAM (DLP)**

*Presents*

**Geothermal Reservoir Modeling**

*By*

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**ABSTRACT:**

Reservoir engineering is essential to forecasting the future reservoir performance based on measurements of its past performance. Later in the life of a development, it is possible to take a retrospective look at how valid the forecasts predicted the reservoir behavior. Modelling is conducted at a range of levels, from “whole field” models during the feasibility studies when a go/no-go decision must be made, to well or regional models later in the field life when specific strategies or operational modifications need to be evaluated.

Geothermal energy production is effectively a mining exercise – we mine the heat energy of the earth, while simultaneously mining the data it provides to understand how to produce that energy as efficiently and effectively as possible.

**BIO:**

Roland N. Horne is the Thomas Davies Barrow Professor of Earth Sciences and Professor of Energy Resources Engineering at Stanford University, and Director of the Stanford Geothermal Program. He was formerly the Chairman of the Department of Petroleum Engineering at Stanford from 1995 to 2006. He is best known for his work in well test interpretation, production optimization, and tracer analysis of fractured geothermal reservoirs. So far in his academic career he has supervised the graduate research of 37 PhD and 107 MS students, including about 50 in geothermal topics. Roland is an Honorary Member of the Society of Petroleum Engineers, and a member of the US National Academy of Engineering. He served on the International Geothermal Association (IGA) Board 1998-2001, 2001-2004, and 2007-2010, and was the 2010-2013 President of IGA. He was Technical Program Chairman of the World Geothermal Congress 2005 in Turkey and 2010 in Bali, and again in Melbourne in 2015. Roland is one of the founders of the IGA online database of geothermal conference papers.



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