

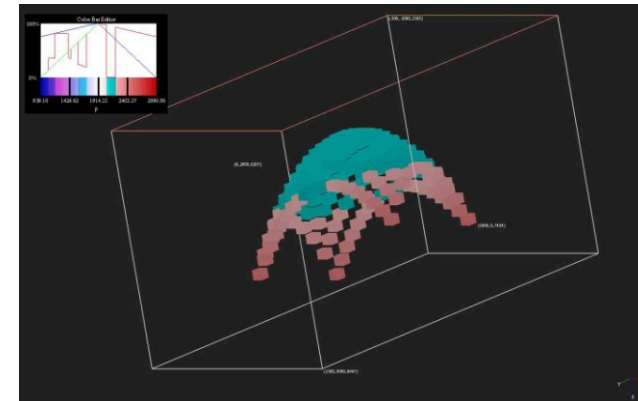
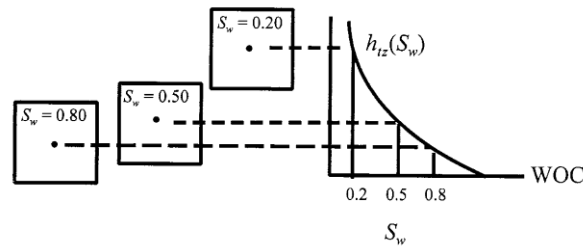
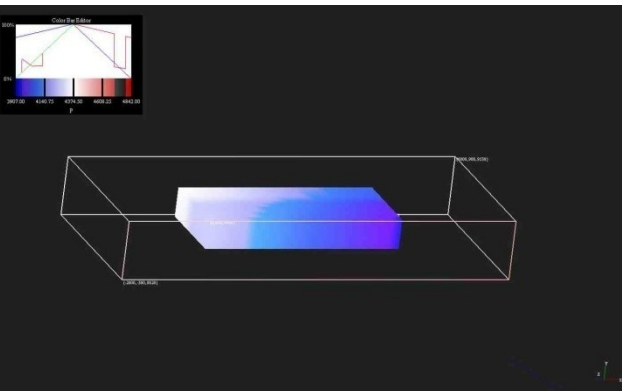
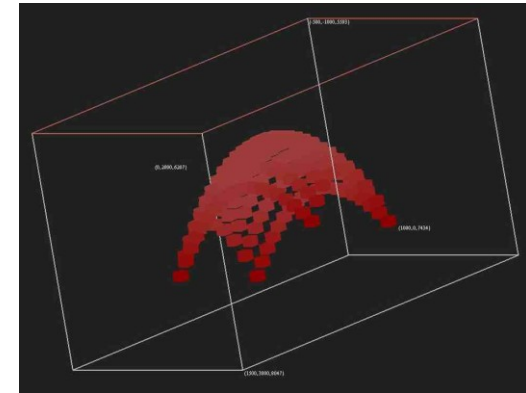
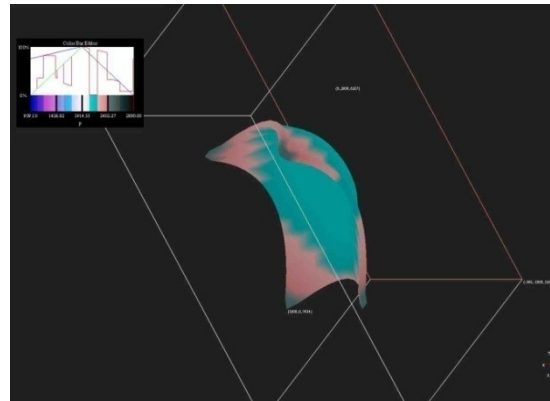
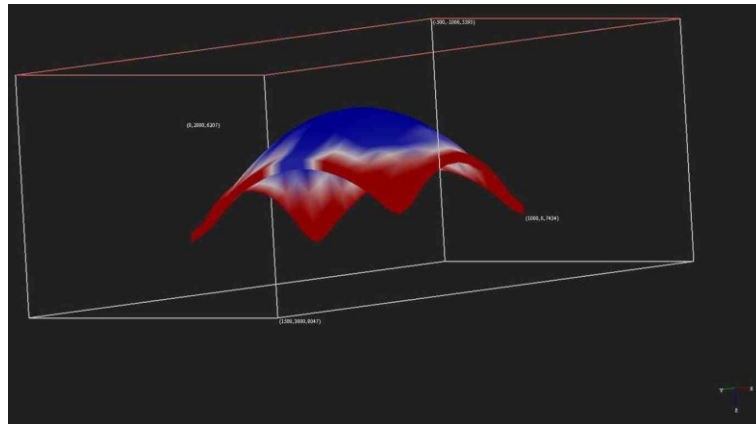
# GeoNeurale

announces

## PRINCIPLES OF APPLIED RESERVOIR SIMULATION

14 - 16 March 2011

Munich



# PRINCIPLES OF APPLIED RESERVOIR SIMULATION

GeoNeurale - MUNICH

at the

*GATE – Garching Technology und Gründerzentrum*

14 – 16 March 2011

3 DAYS COURSE

INSTRUCTOR: Dr John R. Fanchi

LEVEL: Basic - Intermediate

**Audience:** The course is designed to provide an interactive, hands-on experience for course attendees. The course is suitable for geoscientists, engineers and managers with an interest in reservoir management and reservoir flow model studies. Course participants should be familiar with PC's and petroleum reservoir concepts.

COURSE FEES: 2300 Euro + 19% VAT (VAT Tax is 100% refunded from the German Finance Ministry)

REGISTRATION DEADLINE : 22 February 2011

ONLINE REGISTRATION: [www.GeoNeurale.com](http://www.GeoNeurale.com)

# gate



Campus Garching

gate Garching Technologie-  
und Gründerzentrum GmbH  
Lichtenbergstr. 8  
85478 Garching b. München

## GeoNeurale

Office  
and

## Training Location

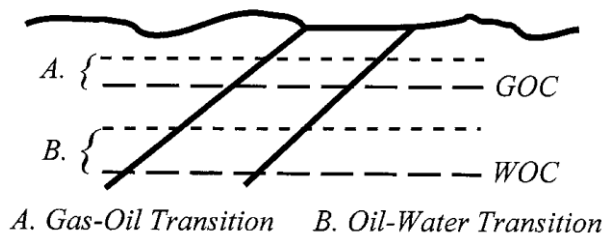
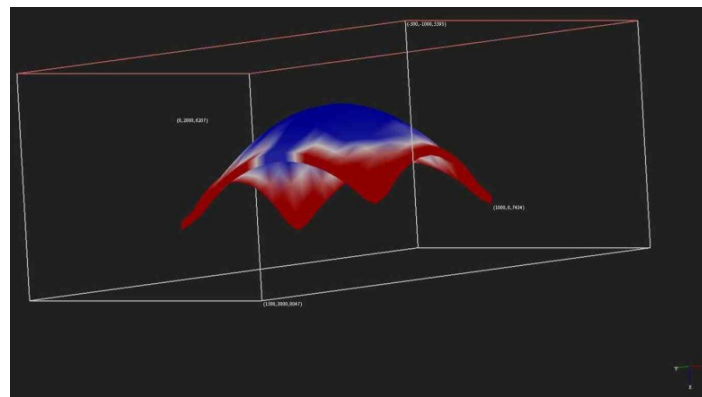
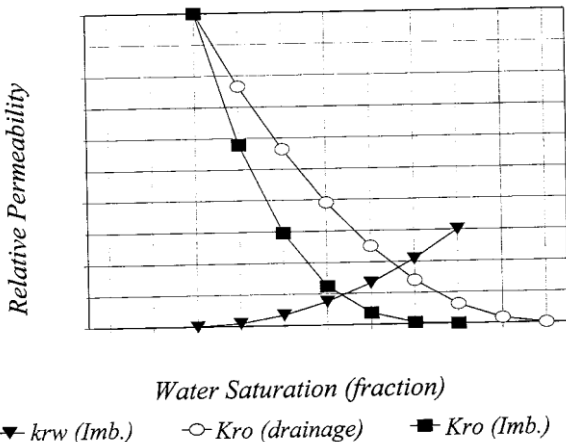


# PRINCIPLES OF APPLIED RESERVOIR SIMULATION

By John R. Fanchi, Ph.D.

Course participants will learn how reservoir flow simulators can be used to perform reservoir management studies of hydrocarbon reservoirs.

Participants will acquire "hands-on" experience running examples using an integrated flow simulator.



$$- \left[ \frac{\partial}{\partial x} \left( \frac{\rho_{osc}}{B_o} v_{xo} \right) + \frac{\partial}{\partial y} \left( \frac{\rho_{osc}}{B_o} v_{yo} \right) + \frac{\partial}{\partial z} \left( \frac{\rho_{osc}}{B_o} v_{zo} \right) \right]$$

$$- q_o = \frac{\partial}{\partial t} \left( \phi \rho_{osc} \frac{S_o}{B_o} \right)$$

# **PRINCIPLES OF APPLIED RESERVOIR SIMULATION**

## **Description:**

You will learn how to use a reservoir flow simulator to study many modern reservoir simulator applications including oil and gas reservoir depletion, waterflooding, gas flooding, fault modeling, geostatistical distribution of reservoir properties, fractured reservoir flow modeling, horizontal well modeling, geomechanical modeling, time-lapse seismic modeling, coal gas production, and carbon sequestration in mature oil fields.

## **Course Text:**

**Principles of Applied Reservoir Simulation, 3<sup>rd</sup> Edition** by J.R. Fanchi (Elsevier, 2006)

## COURSE OUTLINE

| Day | Topic                                   |
|-----|---|
| 1   | Welcome and Introductions               |
|     | Overview of the Course                  |
|     | Reservoir Structure (Gridding)          |
|     | Porosity and Permeability Distributions |
|     | Rock-Fluid Interaction                  |
|     | Pore Volume and Transmissibilities      |
| 2   | Reservoir Geophysics                    |
|     | Fluid Properties                        |
|     | Rock Compressibility                    |
|     | Pressure and Saturation Initialization  |
| 3   | Well Modeling                           |
|     | Data Management                         |
|     | Reservoir Flow Modeling Workflow        |
|     | Applications                            |

## Instructor's Biography

John R. Fanchi, SPE, is Professor in the Department of Engineering at Texas Christian University in Fort Worth, Texas and holder of the Matthews Chair of Petroleum Engineering. Before this appointment, Fanchi taught petroleum and energy engineering courses at the Colorado School of Mines, and worked in the technology centers of four energy companies. He co-edited the General Engineering volume of the SPE **Petroleum Engineering Handbook**, and is the author of several books, including **Energy in the 21<sup>st</sup> Century** (World Scientific, 2005), **Energy: Technology and Directions for the Future** (Elsevier-Academic Press, 2004), **Principles of Applied Reservoir Simulation, 3<sup>rd</sup> Edition** (Elsevier, 2006), **Math Refresher for Scientists and Engineers, 3<sup>rd</sup> Edition** (Wiley, 2006), **Shared Earth Modeling** (Elsevier, 2002), **Integrated Flow Modeling** (Elsevier, 2000), and **Parametrized Relativistic Quantum Theory** (Kluwer, 1993). Dr. Fanchi has a Ph.D. in physics from the University of Houston.

# Registration Details

- Course fee: 2300 Euro + 19% VAT
- Registration deadline : 22 February 2011

## Payment and Registration

Tuition fees are due and payable in Euro upon enrollment in the course by bank transfer to the bank account given below unless another payment form is agreed

Unless otherwise indicated, the payment should be received before the date specified in the invoice as payment term to make the enrollment effective.

To register to the course please fill in the [registration form](#) and fax or email it along with the confirmation of your bank transfer to:

GeoNeurale

Lichtenbergstrasse 8

D-85748 Munich

T +49 89 8969 1118

F +49 89 8969 1117

ONLINE REGISTRATION: [www.GeoNeurale.com](http://www.GeoNeurale.com)

**Bank Information:** Genossenschaftsbank EG Muenchen

Bank Account N. 519618

BIC – Code : GENODEF 1M07

BLZ 701 694 64

IBAN : DE19 7016 9464 0000 5196 18

Please indicate your name and the purpose: "PRINCIPLES OF APPLIED RESERVOIR SIMULATION".

[www.GeoNeurale.com](http://www.GeoNeurale.com)

## Provisions

Tuition fees are due and payable in Euro upon enrollment in the course. Unless otherwise indicated, fees do not include student travel costs and living expenses.

Payments are also accepted via personal or company check, traveler's check, credit card, and Company Purchase Orders.

### Cancellations by Participant:

All cancellations are subject to a 100 Euro non-refundable cancellation fee.

Cancellations have to be notified to our office, at least 30 days prior to the course start date to receive a refund (less the 100 Euro cancellation fee).

If the participants are unable to cancel prior to the 32 days notification date, they may substitute another person at their place in a course by notifying us prior to the course start date.

### Course Cancellations:

GeoNeurale reserves the right to cancel the courses if necessary. The decision to cancel a course is made at least two weeks prior to the course start date. If a course is cancelled, the participant will receive a full reimbursement of the tuition fees (but not of the plane ticket or hotel expenses or any other costs), or will be enrolled in another course upon his decision (the cost of the original course will be applied to the cost of the replacement course).

GeoNeurale can not be responsible for any penalties incurred for cancellation or change of airline or hotel reservations.

### Refunds:

GeoNeurale will promptly remit all refunds of tuition fees due to cancellations or annulment (less any appropriate non-refundable cancellation fee) within 30 days of the course cancellation.

### Force Majeure:

GeoNeurale can not be responsible for cancellations due to "force majeure" events: airplane or airport strikes, emergency situations, natural catastrophes and all situations and incidents independent or outside the human control that can delay or cancel the course. In case of such events related cancellations the course tuition fees will be refunded to the client.

GeoNeurale is not responsible for any delay or absence caused by the training instructor or training instructor company for reasons which are independent or out of the control of GeoNeurale's decisions.

**AGREEMENT:** Upon enrollment all parties accept the above mentioned provisions. The above specified provisions shall regulate the agreement between GeoNeurale and the participant and the participant company and will enter into force upon enrollment.

# REGISTRATION FORM

Please fill out this form and Fax to +49 89 8969 1117

or Email to Courses@GeoNeurale.com

## PRINCIPLES OF APPLIED RESERVOIR SIMULATION

Munich, 14 – 16 March 2011

Course Fee: 2300 Euro + 19 % VAT (VAT Tax is 100% refunded from the German Finance Ministry)

Name:

Company:

Address:

Job Title:

Phone:

Fax:

Email:

SIGNATURE: \_\_\_\_\_

# INFORMATIONS, HOTELS, MAPS, LINKS

## TRAINING LOCATION – RESEARCH CENTER

<http://www.geoneurale.com/documents/GATE-Y7.pdf>

## GATE GARCHING

<http://www.geoneurale.com/documents/GATE-Y6.pdf>

## MAP MUNICH-GARCHING

<http://www.muenchen.city-map.de/city/db/130208000001/14269/Garching.html>

## MUNICH INFO and MAP MUNICH CENTRAL

<http://www.muenchen.de/home/60093/Homepage.html>

## MAP MUNICH UNDERGROUND

<http://www.mvv-muenchen.de/web4archiv/objects/download/3/netz1207englisch.pdf>

## HOTELS NEAR GeoNeurale

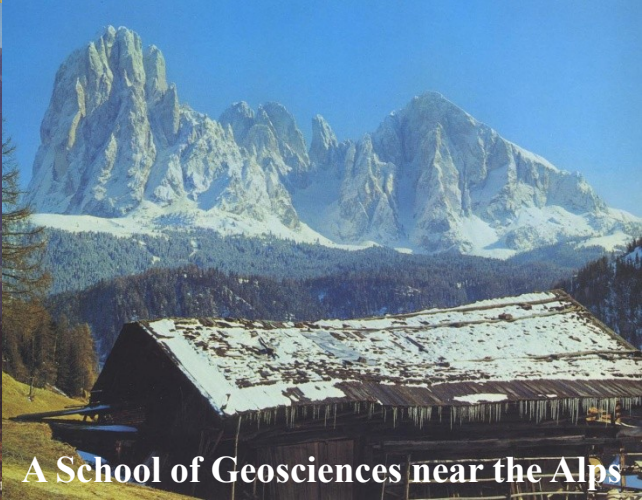
<http://www.geoneurale.com/documents/HOTELS-GARCHING.pdf>

## BAVARIA INFO

<http://www.geoneurale.com/documents/Around-Munich-Info.pdf>



Olympia Park - Munich



A School of Geosciences near the Alps