



ALERT - Geomaterials Application Form

Date: 09.29.08



Team:	<i>Institute of Petroleum Engineering Heriot-Watt University, Edinburgh, Scotland</i>
Responsible ALERT member:	<i>Dr Gary D Couples gary.couples@pet.hw.ac.uk</i>
Link to the website¹:	<i>http://www.pet.hw.ac.uk</i>
Size of the research group:	<i>Number of Seniors (3), Post-docs (3) and Doctoral Students (4), Technical Assistants (3)</i>

Researchers	Topic(s) of interest²
<i>Gary Couples</i>	<i>Numerical simulation of natural deformations Pore-scale investigations of deformed geomaterials Multi-phase fluid flow experiments and simulations Laboratory experiments using geomaterials</i>
<i>Helen Lewis</i>	<i>Numerical simulation of natural deformations Acoustic properties of geomaterials Natural fracturing</i>
<i>Jim Somerville</i>	<i>Laboratory testing of reservoir rocks Wellbore stability Acoustic and flow properties of reservoir materials</i>

Post-docs	Topic(s) of interest²
<i>Jingsheng Ma</i>	<i>Flow simulation through complex geomaterials Coupled geomechanics and flow simulations</i>
<i>Kejian Wu</i>	<i>3D reconstructions of porous materials Pore-scale flow simulations</i>
<i>Zeyun Jiang</i>	<i>Pore network analysis</i>

¹ Link to the ALERT page active in the web page in the site of the local institution.

² Each topic should be actively linked to the list of the relative pdf papers.



Present PhD students	Title of the thesis
<i>Salah al Dhahab</i>	<i>Fractured Carbonate Reservoirs of North Oman</i>
<i>Aisha Paez</i>	<i>Role of Faults in Petroleum Systems</i>
<i>Jim Guest</i>	<i>Kinematically-Controlled Geomechanical Simulations of Reservoirs</i>
<i>Elma Charalampidou</i>	<i>Full-Field Investigations of Sandstone Deformation</i>

Number of international journal papers in the last five years:	<i>19</i>
Number of conference papers in the last three years:	<i>40</i>
Number of invited/keynote lecturers in the last three years:	<i>12</i>

Titles of books (as author or editors) in the last five years

- 1) Lewis, H. and Couples, G.D. (eds). 2007. *Relationships Between Damage and Localization*, Geological Society of London, Special Publications **289**, 247p.

Research Projects in the last three years (max five titles)

1) Title:	<i>Pore-Scale Investigations</i>		
Source Budget:	<i>EPSRC (UK Government Research Council)</i>		
Period:	<i>3 years</i>	Funding:	<i>£560k</i>

2) Title:	<i>Caprocks2</i>		
Source Budget:	<i>Industry Consortium (10 sponsors)</i>		
Period:	<i>3 years</i>	Funding:	<i>£1.2M</i>

3) Title:	<i>Characterisation of Carbonates from Ghawar</i>		
Source Budget:	<i>Saudi Aramco</i>		
Period:	<i>2 yrs</i>	Funding:	<i>£250k</i>