

## **Current Research Interests of Prof. Jorge Gomes**

*(For further details and enquiries for Graduate and Post-Doctoral Research opportunities in the projects listed below, please contact Prof. Gomes at: [jgomes@@pi.ac.ae](mailto:jgomes@@pi.ac.ae))*

### **1. Carbonate Reservoir Characterization**

- The role of diagenesis in reservoir characterization – How is the integration done in the modeling process?
- The reservoir framework of cyclic-shelf carbonate reservoirs – What is important to capture during the layering process?
- Relationship between diagenesis, rock fabric and wettability – Need a better understanding of the processes along the oil column, from the transition zone to the irreducible zone.
- Predict rock properties and facies using Neural Networks – What to do when not enough core data is available?

### **2. Modelling Carbonate Reservoirs**

- Object versus Pixel based modeling – pros & cons
- Use of analog data in reservoir modelling – How is the information integrated?
- Sequence Stratigraphy versus Lithostratigraphic correlations in modeling – Implications to fluid flow.
- Integrated workflows in reservoir modeling – How to streamline the process?
- Integration of dynamic data to capture flow units – Fine tune this synergy
- Upscaling of reservoir rock types – How to do it properly?

### **3. SCAL on Carbonates**

- Characterization of Rock Types
- Wettability implications on RRT classification
- Static versus Dynamic rock types
- Build a standard taxonomy for rock typing