

General Theme 5

5.3

Critical physiographic transition zones in sedimentary systems are areas of major changes in sediment transport and depositional processes and/or earth surface gradient. Under consideration in this proposed session are works related with i) the shoreline, which marks the transition from coastal plain to shelf, ii) the shelf-edge rollover, which marks the transition from shelf to submarine slope, and iii) the continental rise (base-of-slope), which marks the transition from submarine slope to basin-floor systems.

Sediment transported through open fluvial channels is reworked by tidal and wave currents after initial deposition, in a tract commonly referred to as the fluvial-marine transition zone (FMTZ). At the clinoform rollover, wave-dominated systems tend to transfer less sediment basinward than river-dominated systems leading to a range of depositional architectures at the clinoform rollover zone (CRZ). At the base of slope, channelized sediment gravity flows pass into less confinement in the channel-lobe transition zone (CLTZ).

The accurate interpretation of the stratigraphic and palaeogeographic record of these critical zones helps to refine understanding of the interplay of sedimentary processes, and basin-fill architecture. However, their rock record, including the preserved distribution of facies and architecture, the transfer from geomorphic into stratigraphic surfaces, and their downdip architecture, is challenging to document. Therefore, in this session we invite studies from modern and ancient examples of FMTZs, CRZs, and CLTZs in order to move towards establishing common recognition criteria, and/or investigating the key parameters that control differences in the sedimentary archive between systems.