

## **General Theme 4**

### **4.4**

Understanding paleotemperatures in sedimentary systems provides valuable insight into ancient depositional systems, paleoenvironments, burial histories, and the potential for economic resources. Over the years, multiple tools have been developed and applied, some based on mineral/elemental components and others on organic matter, all with their advantages but all with pitfalls. This session is open to all research on temperature proxies in sedimentary basins, including clumped isotopes, oxygen isotopes, fluid inclusions, rock-eval, apatite fission track, and others. Studies comparing results from multiple proxies are especially welcome. A preference will be given to application studies, such as those that use paleothermometry in studies of paleoceanography, paleoclimate, burial temperatures related to hydrocarbon development, and formation temperatures of mineral deposits. Ultimately, the quest for the perfect, or more modestly the best, paleothermometer tool is still on and this session will hopefully generate discussions and ideas about the future research steps towards that end.