Interface failure in thin film structures and composite materials

| Organiser | Institution | Contact |
|---------------|---------------------------------|--------------------------|
| Megan Cordill | University of Leoben Austria | megan.cordill@oeaw.ac.at |
| James Dean | | |

Summary

D2-III

In many material applications multi-material systems are used which are prone to failure by interface delamination or fracture. This symposium deals with testing methods, mechanical concepts, and characterization techniques which shed light into the underlying delamination and failure mechanisms.

The materials involved span from thin films on substrates, hard coatings, films on flexible substrates, lamellar microstructures, nanostructured materials to metal-ceramic and metal-polymer composites. Topics include:

- o Adhesion, interface failure, channel cracking, buckling, local fracture properties
- o Strain rate and temperature effects
- o Embrittlement and segregation
- o Fatigue damage mechanisms
- o Crack healing and toughening mechanisms