

Preface

Today, ceramic composites are quite mature materials and new problems arise with their imminent use in various systems, for which reliable simulations of behavior would be very useful to predict performances.

Furthermore, customizing properties would broaden the range of applications. Reliable simulations require appropriate input data, and must be based on sound testing methods that allow specific characteristics to be determined. But, the testing program should not be time and money consuming. Therefore, numerical approaches such as virtual testing need to be developed.

A 3 day workshop on testing and modeling ceramicmatrix composites for high temperatures has been held in Paris (France) during the week of June 4–6, 2014. The workshop was organized by the Laboratory of Mechanics and Technology (CNRS and University of Paris).

The workshop focused on new trends in testing and modeling ceramic matrix composites. Topics included, new experimental methods, advanced models and new numerical methods for simulation of processing, microstructures and fiber preforms, mechanical behavior and lifetime. As the recent NHSC-MS Boulder Workshop on composites for use at temperatures above 1400°C, this meeting fills the gap between HT CMC Conferences.

Participants were limited in order to stimulate discussions on experimental and numerical testing of CMCs, and topics of interest for reliable predictions of the performances of composite components in service. The workshop was formatted in invited keynote lectures, oral presentations and a poster session.