Abstract. This workshop brought together mathematicians, physicists and material to discuss emerging applications of mathematics in materials science.

Mathematics Subject Classification (2000): 73xx, 35xx, 49xx.

Introduction by the Organisers

This meeting brought together an interesting and inspiring mix of mathematicians, physicists and material scientists, both theoreticians and experimentalists, to discuss new challenges for mathematics arising from materials science and the use of mathematical ideas in materials science. The talks and extensive informal discussions covered phenomena on all the relevant length scales, atomistic, mesoscopic and macroscopic, with particular emphasis and rigorous bridges between these scales.