



CEITEC
BRNO UNIVERSITY
OF TECHNOLOGY

UPCOMING

ADVANCED MATERIALS AND NANOTECHNOLOGY

SEMINAR SERIES

prof. ROBERT VAßEN

Forschungszentrum Jülich, Germany

Repair of Ni-based Superalloys using Cold Spray

NOVEMBER, 20

Tuesday, 12:30

Seminar room S2.02, building S
CEITEC Brno University of Technology
Purkynova 123

Invited by:

Ladislav Čelko

Turbine blades in aviation engines and stationary gas-turbines are exposed to extreme environments. These lead to different damages such as creep, oxidation and crack formation of the nickel based single-crystal superalloys and therefore the need for new repair methods. In this presentation, results of cold spraying of nickel-based super alloys IN718, IN738 and IN625 are presented as attractive repair process. The results include the outcome of microstructural investigation, residual stress levels in the coatings measured by different techniques, the influence of different surface treatments on the bonding strength as well as the influence of the deposition temperature.