

## **Right Properties at the Right Place (RP@RP)**

The manufacturing of products using FRP has from the beginning included simultaneous design of material, its structure and the geometry of the product. Thereby enabling tailored properties at varying locations. These steps were usually separated for alloys. The material was produced with a microstructure, then shaped and often combined with heat treatments to further adapt the microstructure. The talks during this seminar describe two approaches for RP@RP. The use of mixed materials and the integrated design of microstructure and properties for alloys.

### **Taking the next step in lightweight design by using mixed materials**

*Daniel Berglund, RISE*

Combining high strength metals and sustainable composites in structural components has the potential of giving products with lower weight and additional functions, as for example integrated batteries. The presentation gives an insight in the potential challenges of combining composites with metals.

### **Physics based constitutive models**

*Lars-Erik Lindgren, Luleå University of Technology*

The constitutive models are crucial whenever simulating any kind of phenomenon. The talk focus on coupled microstructure and property models for metals and alloys applicable when simulating industrial material processes. Some examples will be given for steels and Alloy 718.



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