

**Kelvin Probe Force Microscopy analysis of
surface potentials and patch effects in Casimir
force measurements**



Location: VIP room Nb4, Zernike Institute for Advanced Materials (<http://www.rug.nl/fmns-research/zernike/index>)

Thursday, June 28

Morning session

09:00 – 09:30: Opening & welcome coffee

Talk: 09:30 – 10:30

C. Speake: Patch field effects in fundamental physics experiments

Discussion: 10:30 – 11:00

Talk: 11:00 – 12:00

S. Reynaud: Casimir effect and electrostatic patches

Discussion: 12:00 – 12:30

Lunch break: 12:30 – 13:30

Afternoon session

Talk: 13:30 – 14:30

R. Decca: Casimir force measurements: Experimental search for the effect of “patches”

Discussion: 14:30 – 15:00

Talk: 15:00 – 16:00

G. Ruoso: An apparatus to measure the Casimir effect in the plane parallel configuration: experimental study of possible patch induced spurious effects

Discussion: 16:00 – 16:30

Summary & discussion of the day topics: 16:30-17:30

Friday, June 29

Morning session

Talk: 09:00 – 10:00

A. Liscio & C. Genet: Kelvin Probe Force Microscopy (KPFM): a quantitative investigation of the potential of charged nanostructures

Discussion: 10:00 – 10:30

Talk: 10:30 – 11:30

R. Behunin: Insights on the role of patch potentials in Casimir force measurements from an exact treatment in the sphere-plane geometry

Discussion: 11:30 – 12:00

Lunch break: 12:00-13:00

Afternoon session

Talk: 13:00 – 14:00

J. Laurent: Casimir force and contact potential measurements in Au-Au and Au-Si cavities at low temperature

Discussion & closure: 14:00 – 15:00