



**4th International Summer School
of the SFB/TRR21
"Control of Quantum Correlations in Tailored Matter"
Heinrich-Fabry-Haus, Blaubeuren
July 26 - 28, 2011**

Scientific Topics:

Atom-Surface Interactions

(Chair: J. Fortágh, T. Pfau)

Speakers:

Clemens Bechinger, University of Stuttgart
Stefan Scheel, Imperial College, London

Topics:

Critical Casimir forces (C. Bechinger)
Electromagnetic dispersion forces (S. Scheel)
Decoherence and dispersion forces near surfaces (S. Scheel)

Quantum Metrology

(Chair: R. Kleiner, J. Weis)

Speakers:

Oliver Kieler, PTB Braunschweig
Blaise Jeanneret, Federal Office of Metrology, Bern

Topics:

New SI units (J. Weis)
The Josephson effect and the voltage standard (O. Kieler)
The Josephson Arbitrary Waveform Synthesizer (O. Kieler)
The quantized Hall resistance as a resistance standard (B. Jeanneret)
The watt balance route towards a new definition of the kilogram (B. Jeanneret)

Poster Session:

Presentations by the students of the SFB/TRR21

Overview:

Tu 26.07.	Speaker	Wed, 27.07.	Speaker	Thu, 28.07.	Speaker
	<i>Arrival</i>	9:00-9:20	Jürgen Weis <i>New SI units</i>	9:00-10:10	Blaise Jeanneret <i>The quantized Hall resistance as a resistance standard</i>
		9:20-10:50	Oliver Kieler <i>The Josephson effect and the voltage standard</i>		Discussion
			Discussion		
		10:50-11:20	Coffee Break	10:10-10:30	Coffee Break
		11:20-12:20	Stefan Scheel <i>Decoherence and dispersion forces near surfaces</i>	10:30-11:40	Blaise Jeanneret <i>The watt balance route towards a new definition of the kilogram</i>
			Discussion		Discussion
				11:40-12:00	Final Discussion
12:30-14:00	Lunch	12:30-14:00	Lunch	12:00-13:30	Lunch
14:00-15:20	Clemens Bechinger <i>Critical Casimir Forces</i>				Departure
	Discussion				
15:20-15:50	Coffee Break				
15:50-17:20	Stefan Scheel <i>Electro-magnetic dispersion forces</i>	14:00-18:30	Excursion		
17:20-17:45	Coffee Break				
17:45-18:45	Begin poster session				
19:00	Dinner	19:00	Dinner		
20:00	Poster session continues	20:00-21:00	Oliver Kieler <i>The Josephson Arbitrary Waveform Synthesizer (JAWS)</i>		