



Seminar A:
**Kurzzeitspektroskopie an Molekülen, Clustern und
Oberflächen**

am Donnerstag, den 30.09.2004,

Geb. A, Raum 2.01

10 c.t.

spricht

**Prof. E. Audouard, Laboratoire Traitement du Signal et Instrumentation,
Université Jean Monnet**

über

**ULTRAFAST LASER PROCESSING : NEWS TOOLS AND
INDUSTRIAL DEVELOPMENT**

Abstract:

Recent quantitative studies on microprocessing and laser-matter interaction using femtosecond lasers will be reported, particularly ablation rates for several materials. An experimental approach will be presented to measure the spread of the thermal effects in metals due to femtosecond laser pulses. The use of active and adaptive optics associated to femtosecond processes is a good way to improve the quality of laser material processing by employing phase-manipulated pulses with designed spatial and temporal intensity profiles. This approach is highly competitive compared to the commonly used amplitude filtering, because phase filtering does not affect the transmission of the device, which is of prime importance for micromachining applications. Moreover, an adaptive optical system enables a computer-driven beam shaping.

Interessenten sind herzlich eingeladen

Prof. I. V. Hertel