

2012 / 11 / 23 (Friday)

频标楼3楼报告厅

10: 30 – 12:00

武汉物数所理论与交叉学术交流系列报告 (三十三)

Ultrafast high THz-field driven charge transport in photo-generated plasmas in semiconductors:
transition from ballistic to diffusive transport regime

We present an experimental and theoretical study of charge transport in semiconductors in single-component electron and hole plasma, n- and p-doped samples respectively. The transport is initiated with ultra-short THz transients of amplitude in the 100-300 MV/cm and followed up and mapped with electro-optic sampling techniques. There is evidence of the transition from ballistic to diffusive (drift like) regime and the role played by the quantum coherences and quantum kinetic scattering processes. We also address the issue of quantum friction.

Education:

M. Eng. (Engineering Physics) Royal Institute of Technology (KTH), Stockholm, Sweden

DEA (M. Sc. Quantum Physics), Ecole Normale Supérieure, Paris France

D. Sc (Physics), University of Paris, Paris, France

Past Position:

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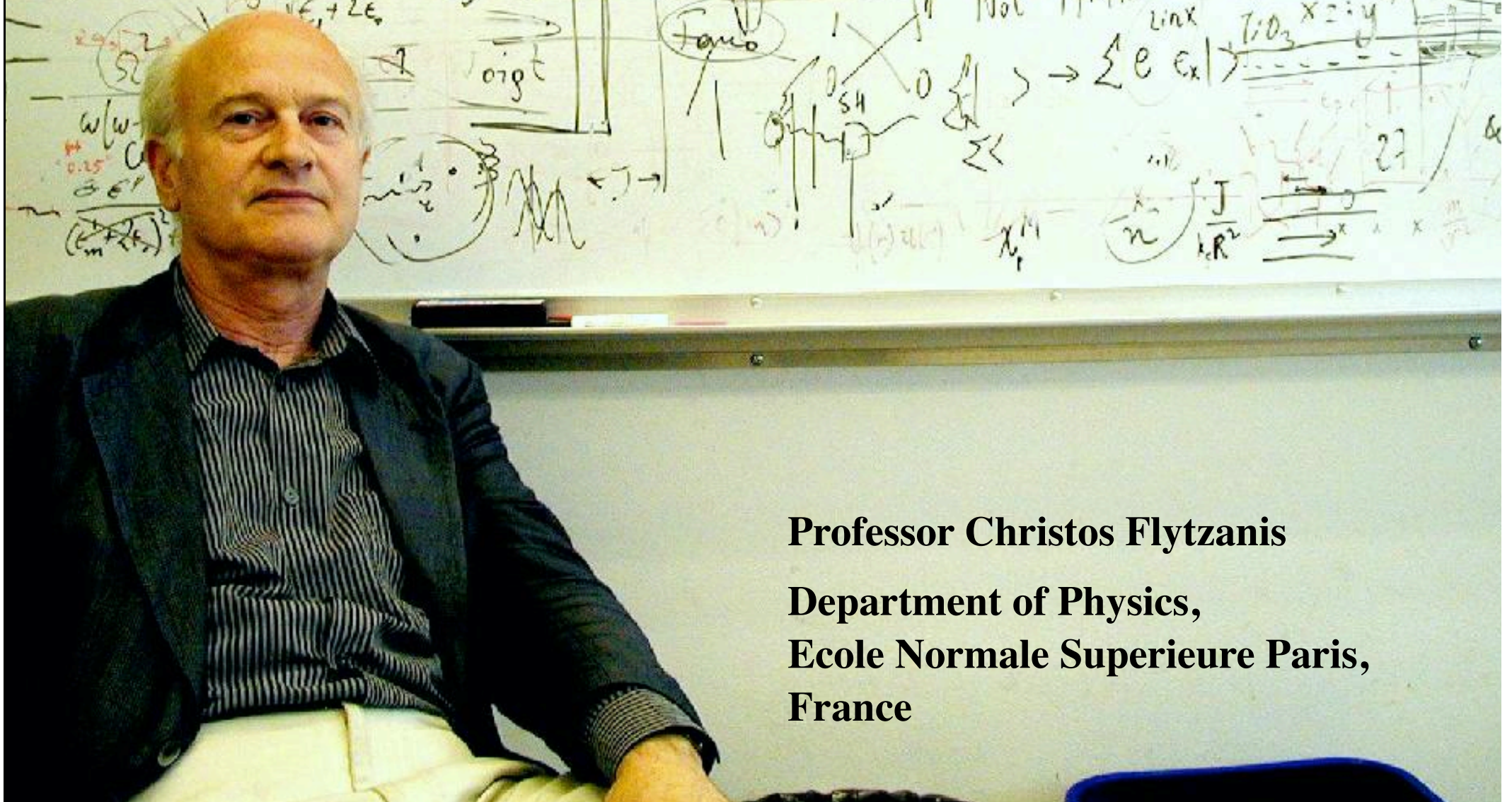
A.v. Humboldt Guest Professor, Max Planck Insti Quantum Optics, Munich, Germany

Present Position:

Research Professor, Physics, Ecole Normale Supérieure, Paris, France

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