＝＝アト秒量子ダイナミクスセミナーのご案内＝＝＝＝

２月２６日（火）１５：００より、Marcelo Fabian Ciappina 先生（ELI Czech）のセミナーと開催いたします。

Ciappina 先生 は原子・分子物理、アト秒物理の研究において気鋭の理論研究者であります。 最近では、強レーザー場中のナノ構造のダイナミクスご関心をお持ちで、強レーザー照射による固体の高次高調波発生やナノ粒子の応答など、アト秒物理の最新の問題について勢力的にご研究を推進していらっしゃいます。この度のセミナーでは、ナノ物質からのイオン化や高次高調波発生についての理論的研究のレビューをお話していただきます。
みなさまのご参加をお待ちしております。

お問い合わせ　量子科学研究センター　森下亨

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日時：２月２６日（火） 15:00-16:00
場所：東６号館　５２９セミナー室

SPEAKER: Dr Marcelo Fabian Ciappina,
ELI Beamlines Project Division, The Czech Academy of Sciences
TITEL: "Attosecond Physics at the Nanoscale: the ultimate frontier Polarization analysis
of high harmonic generation in crystalline solids"

Abstract:
Recently two, a priori, different branches of physics have started to merge. One is attosecond physics, that deals with, both theoretical and experimentally, the phenomena which take place when ultrashort laser pulses, with durations ranging from the attosecond to the femtosecond time scale, interact with atoms, molecules or solids. The laser-induced electron dynamics occurs natively at an attosecond time scale, where e.g. the period of a classical electron in a hydrogen atom is 152 as, and consequently, the underlying physics requires tools employing attosecond time resolution (both in theory and experiments). This subject has reached great maturity on the basis of

well-established theoretical developments and the understanding of different nonlinear phenomena, as well as thanks to the formidable advances in experimental techniques. Nowadays, for instance, measurements with attosecond precision are routinely performed in several facilities around the world. The second branch involves the manipulation and engineering of mesoscopic systems, e.g. solids, metals, dielectrics, with nanometric precision, a scale that was only reached recently. In this way, it is possible to design and build bulk matter samples which pave the way to study light-matter interaction in a completely new regime. In this seminar I'll summarize the theoretical work we have done to tackle the underlying physics of laser-matter processes driven by spatially and temporal synthesized fields, with a main emphasis in above-threshold ionization (ATI) and high-order harmonics generation (HHG) in atoms and molecules induced by plasmonic fields.