

## 物理教室

21COE 物質階層融合科学 セミナー

物性コロキウム

日時： 2007年8月31日(金) 13:30~14:30

場所： 理学部 理学総合棟 745号室(大学院講義室I)

講師： 越野和樹(東京医科歯科大学教養部)

題目： Novel method for solving the quantum nonlinear dynamics of photons: Use of a classical input

要旨：

In order to investigate the nonlinear dynamics of photons, one must in principle solve a quantum many-particle problem, which usually requires intensive computation.

In this study, we show that the spatial wavefunction of photons after nonlinear interaction can be obtained with less computation, by assuming a classical input pulse and calculating a correlation function in the output field.

This method is particularly useful when nonlinear optical media have many mechanical degrees of freedom, where quantum many-particle problems become extremely difficult.

引き続いて行われる Tikhodeev 教授の講演との関係で講演は英語でお願いしてあります。

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