

# エクストリームフォトンクスセミナー *Extreme Photonics Seminar*

No. 5

Language: Japanese

**Date:** July 26th(Mon), 2010, 10:00 ~ 12:00

**Location:** Cooperation Center, 5F Meeting Room, W524

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**Title:** Development and applications of highly functional ultrashort pulse fiber laser sources using ultrafast nonlinear fiber optics

**Speaker:** Prof. Norihiko Nishizawa (Nagoya Univ.)

Passively mode-locked fiber lasers are stable and practical ultrashort pulse sources. Besides, ultrafast nonlinear phenomena in optical fibers have a lot of applications and exciting possibilities. We have been investigating the highly functional wideband ultrashort pulse fiber laser sources using ultrafast fiber nonlinear effects and their applications. In this talk, the achievements and recent results are presented about following four topics:

1. Ultrashort pulse fiber lasers
  2. Wideband wavelength tunable ultrashort pulse sources
  3. Super continuum generation and applications
  4. Phenomenon of pulse trapping and applications
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**Title :** Dark energy, dark matter, and couplings with electromagnetic fields

**Speaker:** Prof. Shinji Tsujikawa (Tokyo Univ. Sci.)

I review the recent status of cosmology, paying particular attention to dark energy and dark matter. I discuss the possibility of couplings between electromagnetic fields and dark components of the universe. The future high-intensity experiments may be useful to place constraints on such couplings.