بسمه تعالی

اطلاعیه برگزاری سمینار علمی

عنوان:

Light processing via all-optical bistable switch

Using a single active element circuit design

ارائه دهنده:

آقای دکتر حسین سرافراز یزدی

Southern Illinois University Carbondale
Carbondale, IL, USA

Abstract:

Researches are going on to optically implement a fast bi-stable device for future integrated photonic circuits. Optical implementation of photonic circuit elements in most cases offer much higher speeds. Specifically in A/D conversion area of research, for decades efforts has been made to come up with more efficient and faster switching devices. One of such devices is a so-called Schmitt trigger switch that has many applications specially in A/D conversion circuits. This noise reducing device which is a key component to delta-sigma modulators has a hysteretic (bi-stable) transfer function.

First, I will briefly go over the device's bistability characteristics through the combination of two inverting amplifier or equivalently two semiconductor ring lasers (SRLs) and then I will, go over an all-optical bistable switch design as my recent experimental research. This novel design uses a common **single** active element (SOA) with two separate paths to operate as a bistable device. This device promises a fast switching characteristic that can be incorporated in larger all-optical photonic analog to digital converters (ADC).

مکان ارائه: کلاس شماره۳- طبقه همکف پژوهشکده لیزر و پلاسما

زمان ارائه: یکشنبه ۹۶/۴/۲۵، ساعت ۱۵:۳۰