Abstract Submitted
for the OSS16 Meeting of
The American Physical Society

**Four-wave mixing in Silicon waveguides** COLLEEN BRANSLEY, IMAD AGHA, YUN ZHAO, University of Dayton — Four-wave mixing in silicon waveguides is a novel method of optical switching. In essence, three wave patterns are used to produce the optical switching effect. The first is a strong pump wave, the second is a weaker secondary pump and the last is a low power wave. The three waves are mixed in order to convert the signal to an idler. The switching functions by using the low power pump signal. When the low power signal is on the switch is on and when the low power signal is off the switch is off. All the input waves are triggered from the same source so that the switching is synchronous. In my work, I focus on how to generate the necessary input wave and how to lock them together

Colleen Bransley
University of Dayton

Date submitted: 18 Mar 2016 Electronic form version 1.4