



**Workshop/Symposium:
Slow and fast light - from basic principles to ICT applications**

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Abstract.

In recent year slow and fast light propagation has been successfully demonstrated in several room temperature devices, which now include, just to mention a few examples, active waveguides, nonlinear fibers, photonic crystal waveguides and cavities, and ring resonating cavities.

Although the research results have been highly consolidating, there are still basic physical problems to understand and overcome in order to unleash the entire potential of this technique. In parallel to the great advancement in slow and fast light device quality, the list of possible application has been also enlarging and several breakthrough results can already be mention in photonics as well as in related fields like for example microwave-photonics.

In this Workshop, world-top scientists in slow and fast light science will review the state of the art of slow and fast light science, from the viewpoint of both device-oriented and applied research. The open discussion following the presentations will be devoted to identify the future directions in this exciting and promising field, which might include the enhancing of the performance of the devices and novel applications.

Presentations:

"Slow light in photonic crystals"

Toshi Baba, Yokohama National University, Japan

"The nature of Bloch mode propagation in photonic crystal waveguides"

T. Krauss, University of St Andrews, Scotland, UK

"Optical fibers and slow light- a platform for new insights and innovations"

Moshe Tur, Tel Aviv University, Israel,

"Fast-Light in Optical Fiber Resonator: White Light Cavity, High Speed Data Buffering and rotation Sensing";

Selim M. Shahriar, Northwestern University, USA,

"Microwave tunable phase-shift and true time delays using Slow light techniques and devices";

Jose Capmany, Universidad Politecnica de Valencia, Spain

Panel Discussion:

What can be really achieved with slow light? From basic physics to ICT applications.