

In Brief: Development of a new chip for characterizing ultrafast optical pulses

September 22 2011

Boosting up microprocessors -the heart of modern computers- at the speed of light, reducing consumptions and costs, may now be a reality thanks to the development of a new high-performance chip, the results of which have been published in *Nature Photonics*.

Fruit of an international scientific team effort, this important step forward has been made by Alessia Pasquazi, a postdoctoral fellow with the team of professor Roberto Morandotti of the Energy, Materials and Telecommunications Centre at INRS. With this new chip, Dr. Pasquazi has ushered in a new era for the Internet, and paved the way for myriad applications in metrology and optical telecommunications.

The new device was created using SPIDER technology, renowned as an exceptional tool for characterizing pulses. It allows users to measure the intensity and phase of ultrafast [optical pulses](#) without requiring the use of unwieldy or expensive equipment.

The research received financial support from the Australian research council, Fonds québécois de la recherche sur la nature et les technologies (FQRNT), the Natural Sciences and Engineering Research Council of Canada (NSERCC), and INRS.

More information: The article was published in *Nature Photonics*:
[www.nature.com/nphoton/journal ... photon.2011.199.html](http://www.nature.com/nphoton/journal...photon.2011.199.html)

Provided by INRS

Citation: In Brief: Development of a new chip for characterizing ultrafast optical pulses (2011, September 22) retrieved 2 May 2024 from <https://phys.org/news/2011-09-chip-characterizing-ultrafast-optical-pulses.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.