Research outputs:

**Demonstration of a self-pulsing photonic crystal Fano laser**
Research output: Research - peer-review › Journal article – Annual report year: 2017

**All-Optical Switching Improvement Using Photonic-Crystal Fano Structures**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Photonic crystal Fano structures and their application to ultrafast switching and lasers**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

**Threshold Characteristics of Slow-Light Photonic Crystal Lasers**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Ultrahigh-speed Si-integrated on-chip laser with tailored dynamic characteristics**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Experimental demonstration of non-reciprocal transmission in a nonlinear photonic-crystal Fano structure**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

**Highly Sensitive Photonic Crystal Cavity Laser Noise Measurements using Bayesian Filtering**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

**Hybrid III-V/SOI single-mode vertical-cavity laser with in-plane emission into a silicon waveguide**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

**Hybrid vertical-cavity laser with lateral emission into a silicon waveguide**
Research output: Research - peer-review › Journal article – Annual report year: 2015

**III-V/SOI vertical cavity laser structure for 120 Gbit/s speed**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

**III-V/SOI vertical cavity laser with in-plane output into a Si waveguide**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

**Laser Rate Equation Based Filtering for Carrier Recovery in Characterization and Communication**
Research output: Research - peer-review › Journal article – Annual report year: 2015

**Nonreciprocal transmission in a nonlinear photonic-crystal Fano structure with broken symmetry**
Research output: Research - peer-review › Journal article – Annual report year: 2015

**Slow-light effects in photonic crystal membrane lasers**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

**Thermal analysis of line-defect photonic crystal lasers**
Research output: Research - peer-review › Journal article – Annual report year: 2015
Fano resonance control in a photonic crystal structure and its application to ultrafast switching
Research output: Research - peer-review › Journal article – Annual report year: 2014

Low-power 10 Gbit/s RZ-OOK all-optical modulation using a novel photonic-crystal Fano switch
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Nonplanar nanoselective area growth of InGaAs/InP
Research output: Research - peer-review › Conference article – Annual report year: 2014

Demultiplexing of OTDM-DPSK signals based on a single semiconductor optical amplifier and optical filtering
Research output: Research - peer-review › Journal article – Annual report year: 2011

Simple and efficient methods for the accurate evaluation of patterning effects in ultrafast photonic switches
Research output: Research - peer-review › Journal article – Annual report year: 2011

SOA-based OTDM-DPSK Demultiplexing Assisted by Offset-Filtering
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

The Influence of Optical Filtering on the Noise Performance of Microwave Photonic Phase Shifters Based on SOAs
Research output: Research - peer-review › Journal article – Annual report year: 2011

Tunable true-time delay of a microwave photonic signal realized by cross gain modulation in a semiconductor waveguide
Research output: Research - peer-review › Journal article – Annual report year: 2011

Slow and fast light effects in semiconductor optical amplifiers for applications in microwave photonics
Research output: Research › Ph.D. thesis – Annual report year: 2010

360° tunable microwave phase shifter based on silicon-on-insulator dual-microring resonator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Experimental validation of efficient methods for the prediction of patterning effects in SOA-based optical switches
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Microwave photonic phase shifter based on tunable silicon-on-insulator microring resonator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Microwave photonic true time delay based on cross gain modulation in semiconductor optical amplifiers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Recent advances in slow and fast light for applications in microwave photonics: [invited]
Research output: Research - peer-review › Conference article – Annual report year: 2010

Slow and fast light effects and their applications to microwave photonics using semiconductor optical amplifiers
Research output: Research - peer-review › Journal article – Annual report year: 2010

Slow and fast light in semiconductor waveguides
Research output: Research - peer-review › Journal article – Annual report year: 2010

Tunable microwave phase shifter based on silicon-on-insulator microring resonator
Research output: Research - peer-review › Journal article – Annual report year: 2010
Wideband 360 degrees microwave photonic phase shifter based on slow light in semiconductor optical amplifiers
Research output: Research - peer-review › Journal article – Annual report year: 2010

Wideband microwave phase shifter based on silicon-on-insulator dual-microring resonator
Research output: Research - peer-review › Journal article – Annual report year: 2010

Compact optically-fed microwave true-time delay using liquid crystal photonic bandgap fiber device
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Controlling the speed of light in semiconductor waveguides: Physics and applications: [Invited]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Demonstration of tunable microwave photonic notch filters using slow and fast light effects in semiconductor optical amplifiers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Experimental demonstration of 360 tunable RF phase shift using slow and fast light effects
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Exploring carrier dynamics in semiconductors for slow light: [invited]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Microwave phase shifter with controllable power response based on slow-and fast-light effects in semiconductor optical amplifiers
Research output: Research - peer-review › Journal article – Annual report year: 2009

Microwave photonics processing controlling the speed of light in semiconductor waveguides: [invited]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Optically fed microwave true-time delay based on a compact liquid-crystal hotonic-bandgap-fiber device
Research output: Research - peer-review › Journal article – Annual report year: 2009

Optical signal processing using slow and fast light technologies: [Invited]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Photonic generation of ultrawideband monocycle and doublet pulses by using a semiconductor-optical-amplifier-based wavelength converter
Research output: Research - peer-review › Journal article – Annual report year: 2009

Photonic generation of UWB monocycle using a cascaded semiconductor optical amplifier and electroabsorption modulator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Slow and fast light effects in semiconductor waveguides for applications in microwave photonics
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Slow and fast light in semiconductor structures: physics and applications: [invited]
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2009

The optical chip: high speed and diminutive size
Research output: Communication › Book chapter – Annual report year: 2009
The role of input chirp on phase shifters based on slow and fast light effects in semiconductor optical amplifiers
Research output: Research - peer-review › Journal article – Annual report year: 2009

Widely tunable microwave photonic notch filter based on slow and fast light effects
Research output: Research - peer-review › Journal article – Annual report year: 2009

Analysis of an effective optical filtering technique to enhance microwave phase shifts based on slow and fast light effects
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Broadband microwave photonic phase shifter based on polarisation rotation
Research output: Research - peer-review › Journal article – Annual report year: 2008

Carrier dynamics and slow light in semiconductor nanostructures
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Chirp Dependence of Filter Assisted Slow and Fast Light Effects in Semiconductor Optical Amplifiers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Enhancing light slow-down in semiconductor optical amplifiers by optical filtering
Research output: Research - peer-review › Journal article – Annual report year: 2008

Experimental demonstration of strongly enhanced light slow-down in semiconductor optical amplifiers by optical filtering
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Microwave phase shifter based on mach-zehnder intensity modulator and polarization rotation in an SOA
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Semi-analytical model of filtering effects in microwave phase shifters based on semiconductor optical amplifiers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Slow and fast light effects in semiconductor waveguides for applications in microwave photonics
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Theory of Optical-Filtering Enhanced Slow and Fast Light Effects in Semiconductor Optical Waveguides
Research output: Research - peer-review › Journal article – Annual report year: 2008

Projects:

Slow and Fast Light for Applications in Microwave Photonics
Project: PhD

Dynamics and noise of Photonic-crystal based nano and micro lasers
Project: Research

Governing the speed of light
Project: Research

Activities:

International Nano-Optoelectronics Workshop (iNOW)
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.