

# ORAD RESHEF, PHD

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## Recent experience

**University of Ottawa, Ottawa ON**

**Research Associate**, Advisor: Robert W. Boyd

Jul. 2016 – Present

Modeled, fabricated and optically characterized nano-scale gold metasurfaces and multi-layer stacks.

Managed over 25 students (undergraduate, masters, and PhD). Trained them in experimental methods and in preparation for science communication (conference presentations, writing manuscripts and theses).

Secured over \$4M in research funding from national funding agencies (incl. NSERC, NSF, and DARPA).

**Photonics Online Meetup, Worldwide**

**Co-founder, co-chair**

Sept. 2019 – Present

Led and coordinated the first entirely virtual photonics conference, drawing over 2000 attendees worldwide. Garnered extensive media coverage (incl. *Nat. Photonics*, *OPN News*, *Photonics Media*).

**Harvard University, Cambridge MA**

**Graduate Researcher**, Advisor: Eric Mazur

Sept. 2010 – Jun. 2016

Designed metamaterials and photonic crystals in the silicon-on-insulator platform. Fabricated and optically characterized integrated zero-index metamaterials and waveguides.

Developed fabrication procedure for titanium dioxide integrated photonics. Characterized optical waveguides and resonators.

## Education

**Harvard University, Cambridge MA**

PhD, Applied Physics

Sept. 2010 – Jun. 2016

Dissertation: Integrated metamaterials and nanophotonics in CMOS-compatible materials

**McGill University, Montreal QC**

Bachelor of Science, Honours Physics

Sept. 2006 – May 2009

First class honours, magna cum laude

## Selected skills

**Optical Modeling and Simulations**

Lumerical FDTD and MODE Solutions, COMSOL Multiphysics

**Nanofabrication**

Computer-assisted design (CAD), Process engineering, Lithography, Thin film deposition and characterization, Pattern transfer

**Optical Characterization and Measurement Setup Construction**

Instrument control, microscopes and telescopes, fiber optics, CW and ultrafast lasers, spectrometers

**Programming**

MATLAB, Python, L<sup>A</sup>T<sub>E</sub>X, git

## Publications

25 peer-reviewed publications, incl.:

- 900 citations
- 2 journal covers
- 5 *Nature Research* publications

40 conference proceeding papers

3 patents pending

2 book chapters

3 preprints

## Selected honors and awards

Banting Postdoctoral Fellowship

2017 - 2019

Harvard Quantum Optics Fellowship

2015 – 2016

NSERC Postgrad Doctoral Fellowship

2011 – 2015

## Languages

Native English and Hebrew

Full professional French