



Prof. Dr. Russell Pysklywec

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Research interests:

The focus of my research program is to study deformation of the solid Earth—in particular exploring the complex dynamical couplings between convection in the mantle, tectonics in the crust, and surface processes controlled by the atmosphere. Broadly, the goal of the work is to determine the driving forces for lithospheric tectonics on the active surface of the Earth and other planetary bodies.

The geodynamics research relates to a variety of tectonic regimes that span Earth's history from the Archean to present-day. Specific areas of study include: tectonics in Canada's high Arctic; active continental collision across South Island, New Zealand; slab retreat and overlying orogenesis of the Apennines belt in Northern Italy; lithospheric delamination beneath Eastern Anatolia; and mantle-crust interactions on Io.

Biography:

2013-, Full Professor, Department of Earth Sciences, University of Toronto
2011-, Chair, Department of Earth Sciences, University of Toronto
2010-, McRae-Quantec Chair in Geosciences, Department of Earth Sciences, University of Toronto
2010-2011, Interim Chair, Department of Geology, University of Toronto
2005-2013, Associate Professor, Department of Geology, University of Toronto
2000-2005, Assistant Professor, Department of Geology, University of Toronto
1998-2000, NSERC Postdoctoral Fellow, Dalhousie University
1998, Ph.D. Physics, University of Toronto
1994, M.Sc. Physics, University of Toronto
1993, B.Sc. Engineering, Queen's University

Most important 5 publications:

Heron*, P., R. N. Pysklywec, and R. Stephenson, Intraplate orogenesis within accreted and scarred lithosphere: Example of the Eureka Orogeny, Ellesmere Island, *Tectonophysics*, 664, 202-213, 2015.

Gogus*, O., and R. N. Pysklywec, Mantle lithosphere delamination driving plateau uplift and syn-convergent extension in Eastern Anatolia, *Geology*, 36(9), 723-726, 2008.

Pysklywec, R. N., Surface erosion control on the evolution of the deep lithosphere, *Geology*, 34(4), 225-228, 2006.

Pysklywec, R. N., C. Beaumont, and P. Fullsack, Lithospheric deformation during the early stages of continental collision: numerical experiments and comparison with South Island, New Zealand, *Journal of Geophysical Research*, 107(B7), ETG 3 1-19, 2002.

Pysklywec, R. N., and J. X. Mitrovica, A mantle flow mechanism in the long-wavelength subsidence of continental interiors, *Geology*, 26, 687-690, 1998.