Curriculum Vitae: Edwin D. Waddington

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Education:

- B.Sc. Physics University of Toronto 1971.
- M.Sc. Physics University of Alberta 1973. Thesis Title: *Numerical seismograms by the Cagniard de Hoop method for core diffraction problems*. Advisor: C.H. Chapman
- Ph.D. Geophysics University of British Columbia 1981. Thesis Title: *Accurate modelling of glacier flow*. Advisor: G.K.C. Clarke

Positions held:

- Post-doctoral fellow, University of British Columbia, 1982.
- I.W. Killam Post-doctoral fellowship from U.B.C. at U.W., 1983-1984.
- Research Associate, Geophysics Program, U. of Washington, 1985-1990.
- Senior Research Associate, Geophysics Program, U. of Washington, 1990.
- Research Associate Professor, Geophysics Program, U. of Washington 1991-June 1998.
- Research Professor, Geophysics Program, U. of Washington June-Sept. 1998.
- Acting Professor, Geophysics Program, U. of Washington Sept. 1998-Sept. 1999.
- Adjunct Professor, Quaternary Research Center, U. of W., 1999-present.
- Professor, Geophysics Program, (now part of Dept. of Earth and Space Sciences), U. of W. Sept. 1999-present.

Teaching:

- Earth and Space Sciences 411/511: *Geophysical Continuum Mechanics*.
- Earth and Space Sciences 311: *Geomechanics*. (2005)
- Earth and Space Sciences 431: *Principles of Glaciology*.
- Earth and Space Sciences 505: *The Cryosphere*.
- Earth and Space Sciences 519: *Scientific Writing and Graphics*.
- Earth and Space Sciences 203: *Glaciers and Global Change*.
- Earth and Space Sciences 524: *Mass and Heat Flow Modeling in Earth Sciences*.
- Earth and Space Sciences 595: *Graduate Seminars on current glaciological topics*.
- Honors Arts and Science 222: *Ice Ages, Climate Change, and Scientific Paradigms*. (2002)

University of Washington Service:

- ESS Graduate Program Coordinator (GPC), 2004-2009,
- Acting GPC Sept 2013 - March 2014.
- Program on Climate Change, board member representing ESS 2000-2003 and 2007-present.
- Program on Climate Change Executive Committee 2009-2010.
- 2001 coordinator for Mindlin Lecture.
- ESS Graduate Admissions, 2001, co-Chair 2002, ex-officio 2005-2009.

- ESS Tenure and Promotion 2002-2003.
- ESS Development of a Liberal Arts BA (2003-2004).
- ESS Teaching and Learning Assessment (Chair), 2004-2006.
- ESS Hiring Priorities, 2006.
- ESS Excellence in Teaching Award (Chair) 2006-2007.
- ESS Prelim Exam 2010.
- ESS Computing (Chair) 2010-2011.
- ESS Curriculum Committee 2012 – present.
- College of the Environment Curriculum Committee 2012 – present.

Scientific Community Service:

- AGU Committee on Snow, Ice and Permafrost, 1990-1993.
- Ice Core Working Group, 1991-1995.
- NRC Polar Research Board Committee on Glaciology, 1992-1995.
- CRARY Science Center Users Committee, (McMurdo, Antarctica) 1993-1996.
- US ITASE (International Trans-Antarctic Scientific Expeditions) Steering Committee, 1996-1998.
- WAISCORES (West Antarctic Ice Sheet Ice Cores) Executive Committee, 1997-2001.
- Council of International Glaciological Society, 1995-1998, 2001-2004.
- U.S. Victoria Land Biocomplexity steering committee, 2000-2002.
- Advisory Board for CReSIS (Center for Remote Sensing of Ice Sheets) University of Kansas (an NSF Science and Technology Center); 2005-2009.

Editorial Contributions and Recognition:

- Editor, IAHS (International Association of Hydrological Sciences) Publication 170, *The Physical Basis of Ice Sheet Modelling*, 1987, 384 p.
- 1996 and 2012 Editor's citation for Excellence in Refereeing, *Journal of Geophysical Research*.
- 2000 and 2003 Recognition for exceptional reviewing by Editors, *Journal of Glaciology*.
- 2012 Assoc. Scientific Editor, *Annals of Glaciology,* Glaciers and Ice Sheets in a Warming Climate.

Students Advised:

James Cunningham	MS received 1990.	Michelle Koutnik	PhD received 2009.
John Firestone	PhD received 1992.	Jessica Lundin	PhD received 2012.
David Morse	PhD received 1997.	T.J. Fudge	PhD received 2013.
Paul Jacobson	PhD received 2001.	Regina Carns	PhD expected 2014.
Tom Neumann	PhD received 2003	Adam Campbell	PhD expected 2015.
Erin Pettit	PhD received 2003.	Dan Kluskiewicz	PhD expected 2016.
Bob Hawley	PhD received 2005.	Michael Hay	PhD expected 2016.
Shannon McDaniel	PhD received 2005.	C. (Max) Stevens	PhD expected 2016.

Research Interests:

- Glacier geophysics to complement geochemical analyses of ice cores.
- Applications of Geophysical Inverse Theory to glaciological problems.
- Paleo-precipitation from layering in ice sheets.
- Paleotemperatures from high-resolution borehole temperature measurements.
- Internal flow instabilities and folding near ice-core sites.
- Effect of divide migration and ice rheological properties on stratigraphic layers.
- Shapes of internal layers and isotherms near ice divides.
- Role of glaciers in landscape evolution.
- Role of snow ventilation in the preservation or disruption of chemical signals in polar firn.
- Field studies of ice motion and stratigraphy in Greenland and Antarctica.
- Physics-based modeling of compaction of firn, and ice-age/gas-age difference.

Field Projects:

- Agassiz Ice Cap, Ellesmere Island, Arctic Canada, ice-motion surveys and radar mapping. 1987-1992.
- Summit, Greenland, ice-motion surveys, 1993-1994.
- Taylor Dome, Antarctica, ice-core site selection and interpretation, 1990-1997.
- WAIS Western Divide, Antarctica, ice-core site selection, 2002-2004.
- Roosevelt Island, Antarctica, ice motion and radar stratigraphy, 2011-2013.
- WAIS Divide, borehole sonic-velocity measurements, 2011-2013.
- NEEM, Greenland, borehole sonic-velocity measurements, 2012.

Ice motion strain networks, radio-echo sounding, automatic weather stations, borehole sonic-velocity logging, and microclimate physics to enhance ice-core interpretation and to infer past size of ice sheets.

Research Grants Summary:

- Principal Investigator for 4 currently funded projects. ($1,445K)
- Co-Investigator and UW lead on 1 national NSF PIRE project ($580K to UW)
- Co-Investigator for 3 currently funded projects ($1,379K)
- PI on 1 pending proposal – ($256K)

Publications Summary:

- 105 Publications Published or In Press in Refereed Journals and Books.

Date: 2014-03-28