

SIMON FRASER UNIVERSITY

DEPARTMENT OF PHYSICS
8888 UNIVERSITY DRIVE
BURNABY, BRITISH COLUMBIA
CANADA V5A 1S6

The logo for Simon Fraser University, consisting of the letters "SFU" in white on a red rectangular background.

Phone: (778) 782-4465
Fax: (778) 782-3592
Email: trottier@sfu.ca
Web: www.sfu.ca/~trottier

Dr. Howard Trottier

Brief Curriculum Vitae October 2010

Employment History Highlights

09/2001 – current	Full Professor, SFU
06/2002 - 08/2002	Visiting Professor, Cornell University
01/2001 - 08/2001	Visiting Professor, Cornell University
07/2000 - 08/2000	Visiting Fellow, University of Glasgow
09/1998 - 08/2001	Associate Professor, SFU
02/1999 - 08/1999	Visiting Scientist, Fermilab National Accelerator Laboratory
08/1998 - 01/1999	Visiting Professor, Cornell University
01/1993 - 08/1998	Assistant Professor, SFU
09/1991 - 12/1992	Research Associate, TRIUMF
09/1989 - 08/1991	Postdoctoral Fellow, McGill University
09/1987 - 08/1989	Postdoctoral Fellow, MIT

Educational Background

1987 Ph.D. Physics, McGill University, Canada
1985 M.Sc. Physics, McGill University, Canada
1981 B.Sc. Physics, McGill University, Canada

Current Research Funding

Contract/Grant: Research Grant **Awarded:** 2010 **Period:** 2010 - 2015
Project Title: High-precision lattice QCD for standard and non-standard model physics
Funding: NSERC **Type:** External **Annual:** \$75,000 **Total:** \$375,000
Involvement: Principal Investigator

Scientific Activities Highlights

- Chair of Natural Sciences and Engineering Research Council of Canada (NSERC) Grant Selection Committee for Subatomic Physics (GSC-19), 2008-2009.
- 49 publications in leading peer-reviewed journals, and 45 conference proceedings.
- 10 invited plenary-review talks and colloquia in the past eight years.
- Senior supervisor for 6 M.Sc. and 4 Ph.D. theses.

Service and Teaching Highlights

- Recipient of the SFU University Excellence in Teaching Award (1995).
- Recipient of the SFU Faculty of Science Excellence in Teaching Award (1995).
- Spearheading development of the SFU Astronomical Teaching Observatory and Science Outreach Centre (2009-present).
- Coordinator of SFU astronomy public outreach activities, including hosting over 2,500 grade-school age kids and 400 adults: <http://www.sfu.ca/starrynights>.
- Fourteen subjects taught at all levels of physics undergraduate and graduate programs.
- Member of SFU Faculty College (2007-2008).
- Chair of Physics Graduate Program Committee (2001-2005).
- Coordinator of the University Board on Student Discipline (2003-2005).
- Member of the University Tenure Committee (2001-2003).
- Special University Appointments Committee (2002).

Research Interests

My current research work is focused on high precision calculations of strong interaction quantities using lattice Quantum Chromodynamics (QCD). I am a member of the "High Precision QCD" Collaboration, a group of senior physicists, postdoctoral fellows, and graduate students, at a number of institutions in the US, the UK, and Canada, including: Cambridge, Cornell, Fermilab, Glasgow, Ohio State, SFU, SMU, and TRIUMF.

Our collaboration has produced a wide range of high-impact results, with an emphasis on the physics of systems containing heavy quarks (B 's, D 's, Upsilon's and J/ψ 's). High-precision calculations of hadronic quantities for these systems are needed as input in the search for new physics in precision measurements of rare heavy-flavour physics processes, and to provide validation of lattice QCD methods.

A linchpin of our program is the development and use of aggressive analytical techniques for higher-order perturbation theory matching calculations in lattice QCD, and I have played a leading role in that work. Our collaboration has generated a large number of highly-cited publications in high-profile referred journals, including *Physical Review Letters*, along with numerous conference proceedings and invited talks.

For more details on my research, publications, scientific and general interest talks, and teaching and outreach activities, please visit my web site: <http://www.sfu.ca/~trottier>.